Chapter 2

The dualism of subject and structure in post-Walrasian condition: Rationality, institutions, and selection

1. Introduction.

1.1. The question of “institutionalist” economics.

Within the discipline of economics, a silent struggle is being waged over the label “institutionalist” economics. On the one hand, there is the “old” institutionalism of Thorstein Veblen, Wesley Mitchell, John R. Commons, Clarence Ayres, Karl Polanyi, and more recently, Anne Mayhew, Walter Neale, Charles Wilber, Yngve Ramstad, Malcolm Rutherford, and Geoffrey Hodgson. This school, notwithstanding its numerous internal differences, due to its emphasis on the ways in which institutions, social norms, habits and rituals shape and constitute the individual subject, can be identified as a structuralist discourse. Moreover, with its emphasis on the substantivist methodology and its aversion to mathematical formalism, this approach has come to distinguish itself from neoclassical economics.

On the other hand, there is the new institutionalism of Ronald Coase, Armen Alchian, Gary Becker, Oliver Williamson, Douglass North, Mancur Olson, and more recently, Andrew Schotter, Joseph Stiglitz, Robert Sugden, Samuel Bowles, and Avner Grief.¹

¹ The adjectives “old” and “new” are usually deployed by the proponents of the “old” institutionalist school (for an exception, see Langlois 1986a). This is particularly telling since the term institutionalist economics was once referring only to the proponents of, what is today known
This school, even though it is also an highly heterogeneous formation, due to its emphasis on the ways in which institutions, social norms, and conventions constrain and limit, but not shape and mould, the individual subject, can be identified, primarily as a humanist discourse. Moreover, with its commitment to formal, “theoretical” models of the relation between economic agents and social institutions, this approach, despite being critical of it, does not fully denunciate the neoclassical tradition.

Nonetheless, this neat division between a structuralist “old” institutionalism and humanist new institutionalism is difficult to sustain. In this chapter, I will try to convince the reader that among the different strands of both neoclassical and new institutionalist economics, a number of structuralist moments can possibly be discerned. Moreover, while this point will be peripheral to the main thrust of the chapter, it is also difficult to identify a clear-cut and unified commitment to a singularly defined and universally agreed-upon concept of formalism.

In other words, I will argue that new institutionalism, with its peculiar mix of individual rationality, institutional structures, and selection metaphors, provides a perfect case study for understanding the vicissitudes of the dualism of subject and structure in contemporary as, the “old” institutionalism—hence the ironic scare quotes. This curious situation is a symptom of the hegemony of new institutionalism. All the surveys that are extremely vigilant in distinguishing these two schools from one another comes from the “old” institutionalist camp (Rutherford 1994, Hodgson 1998a, 1998b). While the “old” institutionalism is in constant need of distinguishing itself from the new institutionalism, the latter does not see the need to situate itself in relation to the former. In fact, while it is commonplace to see critiques of the new institutionalist literature in almost every issue of the Journal of Economic Issues—the flagship journal
economic theory. Nonetheless, this is not the only reason that led me to closely investigate the philosophical underpinnings and theoretical structure of new institutionalism. Within the disciplinary topography of economics, new institutionalism is not just another tradition. As the hold of the neoclassical economics began to dissolve, as the discontent with the scriptures of neoclassical formalism began to be widespread, the hegemonic core of the discipline experienced a major dislocation. And in an almost continuous manner, new institutionalism began to occupy the locus of power vacated by neoclassicism. This chapter sketches the elements of this complex and uneven story of transition by taking the vicissitudes of the dualism of subject and structure as its central theme.

Without doubt, given the ample availability of rather accomplished histories of new institutionalism, it is difficult to justify yet another attempt at tracing its genealogy. Nonetheless, I believe that a genealogy of new institutionalism that focuses on the vicissitudes of the dualism of subject and structure will serve a different purpose than a linear/incrementalist narrative of the rise of new institutionalism to canonical status. As such, the following genealogy is not interested in narrating the evolution of economic thought as a linear and incremental progress of knowledge accumulation. In contrast, it will embrace an understanding of the discipline of economics as a realm of political contestation and hegemonic struggles. Accordingly, I believe that the rise of new institutionalism to prominence deserves scrutiny precisely as an instance of the re-

of the “old” institutionalist Association of Evolutionary Economics—, article-length new institutionalist critiques of “old” institutionalism are relatively rare.
entrenchment of the hegemony of the bourgeois discourses within the discipline of economics.

Nonetheless, even though I believe that to document the political reconstitution of the discipline of economics as a result of the process of consolidation of the hegemony of new institutionalism is in itself a sufficient reason to embark upon the project that informs this chapter, my interest in neoclassicism and new institutionalism springs from their equally unacknowledged effectivity in consolidating the ideologies of market within the broader social field. The “positivist fantasy” that informs both neoclassicism and new institutionalism—namely, the fantasy that purges any possibility of rendering “visible” the performative effects of economic knowledge production—does not only occlude the active constitution of the economy as a discrete object of knowledge and, consequently, the “proper” modes of intervening to this object within economic discourse, but also the way in which the model of rational economic agent is offered as a template to be simulated by concrete subjects not only within what may be delineated as the economic realm but also beyond that, across the entire social field (from the political “market” to the marriage “market”). Therefore, the rise to prominence of new institutionalism concerns me not only because it imposes the “proper” modes of practicing economic inquiry on those who wish to diverge from the philosophical, methodological, theoretical, and political commitments of the mainstream of the discipline of economics, but also because its effects extend beyond the struggles within the discipline to the entire social field.

And precisely because I would like to investigate the way in which economic discourses (and in particular new institutionalism as the one that has achieved a certain hegemony
within economics) inform the manifold ways in which social subjects are subjectivated and the social institutions are instituted, I am concerned with the manner in which the relation between the subjects and the structures are conceptualised within economic theory. In other words, in tracing the genealogy of new institutionalism and the vicissitudes of the dualism of subject and structure that informs its theoretical edifice, unlike many other critical histories of new institutionalism that aim to document the failure of new institutionalism to capture the truth of the economic reality, my main concern is to understand the distinct modalities through which new institutionalist economics re-makes the world in its own vision.

1.2. The “origins” and limits of new institutionalism.

Unlike the contemporary representatives of “old” institutionalism, it would be wrong to simply trace the origins of the new institutionalism to what is now known as the American institutionalism of the first half of the twentieth century (see Langlois 1986a and Maki 1993). Rather, the new institutionalist economics represents, in part, a certain turn within neoclassical economics. It is primarily a certain dissatisfaction and disappointment with the basic assumptions of the latter that has led these mainstream economists to introduce various institutional dimensions into their analyses of economic—and other social—phenomena.

At the core of neoclassical economics, we find individual economic agents endowed with axioms of rationality exchanging goods and services under the conditions of perfect information. The basic premise of Walras-Pareto general equilibrium model is to prove that the decentralized actions of individual agents will lead the economy to an equilibrium (where there will be no excess demand or supply) and this equilibrium will be
a Pareto optimal state where no individual agent can be made better-off without making anyone else worse-off. In the mid-twentieth century, Arrow-Debreu competitive equilibrium models established what Leon Walras failed to do: namely, the formal proof of the existence and optimality of an equilibrium price vector that will clear all the markets in the economy (Arrow and Debreu 1954; Debreu 1959). Nevertheless, the necessary assumptions under which these results will hold were so strict that, rather than being received as a triumph of neoclassical economics, these results signalled the need to shift the mainstream research agenda towards an investigation of market failures and institutions.²

What were the sources of dissatisfaction? First of all, there was the question of entrepreneur: Does the real-life entrepreneur make marginality calculation as the neoclassical economics assume them to be doing? This anti-marginalist criticism can be traced back to 1930s in the UK and 1940s in the USA (Vromen 1995:14-21). This criticism has led several key Chicago School economists (Alchian, Friedman, and Becker) to introduce biological metaphors into economic analysis of markets.³ Second, there was the dissatisfaction with the treatment of firm as a black box. There was a significant need

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² While some of the major new institutionalist texts are written earlier in the twentieth century—and here I am thinking of, for instance, Ronald Coase’s “On the Nature of the Firm” from 1937—, their resignification as the canonical texts of the new institutionalist school will happen in the second half of the twentieth century (see, for instance, Williamson 1975). One should take the Arrow-Debreu Model as a turning point precisely in this sense: In its aftermath, the economists have retroactively began to re-trace their lineages. Similarly, Hayek’s ideas, while remained persistently on the margins of the discipline for decades, has attained foundational status only later, in the 1980s, in the writings of Vanberg, Schotter, and Sugden.
to explain the existence of the firm and its internal structure. Here, the literature on transaction costs and information asymmetries provided the central concepts around which the new institutionalist models of firm began to be developed. Third, there was the issue of the strictness of the axioms of rationality. First with Herbert Simon’s work on bounded rationality, and then with Amartya Sen’s seminal essay “Rational Fools” (1977), the concept of rationality have begun to be scrutinised, albeit within certain limits, in the pages of mainstream journals (Sugden 1991). Furthermore, the discontent with the infamous avariciousness of the standard model of the economic agent have led some economists to develop models based on non-selfish behavioural orientations (Adaman and Madra 2002). Fourth, the practical absence of any consistent theory of government involvement in the economy, have led some to theorise the bureaucrats and politicians as self-interest seeking rational agents and the government as a site of rent-seeking activity (Mueller 1989; Orchard and Stretton 1997). And finally, the developments in game theory, especially in the area of non-cooperative games, forced economists to consider institutions, social norms and conventions as functional arrangements for remedying problems of efficiency that result from strategic action.

Nevertheless, these developments in economic theory led to two distinct yet interrelated deadlocks. The first deadlock pertains to the origins of institutions. Given the fact that rational agent (whether it is boundedly so or not) remains to be one of the foundational assumptions of the new institutionalist economics, the institutions themselves were to be explained, in the final instance, by choices and decisions made by the individual subjects.

3 Biological metaphors can be traced even to earlier times. Malthus-Darwin link. The Alfred Marshall and Thorstein Veblen.
Nevertheless, this did not prove to be a very straightforward and contradiction-free task. Jon Elster (1989) succinctly elucidates the structure of circularity that characterises the logic of the dualism of subject and structure:

people’s motives are determined by self-interest and by the norms to which they subscribe. Norms, in turn, are partly shaped by self-interest, because people often adhere to the norms that favour them. But norms are not fully reducible to self-interest, at least not by this particular mechanism. (150; emphasis added)

For if they would, the initial premise pertaining to the determination of the individual motives would have been negated. This is the first manifestation of the circular structure of the dualism of subject and structure.

The second deadlock emerges as a result of proliferation of behavioural orientations. The assumption of rationality does not confine the individual subject to a self-interested behavioural orientation. Indeed, in the last three decades models based on non-selfish behavioural orientations (altruistic and reciprocal behaviour) have become more and more commonplace (for a critical survey, see Adaman and Madra 2002). As homo economicus became one behavioural orientation among many, the central question has also become one of specifying how an individual assumes a particular behavioural orientation?

If one insists on explaining the distribution of different behavioural orientations as an outcome of individual choices, then there should be a theoretical explanation of the process of choosing among different orientations. But then what would be that meta-orientation which will enable the subject to make choice among different orientations?

Since, when one behavioural orientation (e.g., homo economicus) is elevated to the status of meta-orientation the plurality of behavioural orientations will evaporate, the
methodological individualism falls into an impasse: it should either reject the possibility of multiple behavioural orientations or should introduce some other mechanism for explaining how one assumes a particular behavioural orientation.

These two deadlocks are indeed the two distinct yet related impasses of the dualism of subject and structure. The former impasse contours the internal logical limits of the project of “endogenisation” of institutions and norms—namely, the logical impossibility of putting an end to the infinite regress of the dualism of subject and structure; the latter encircles the impossibility of rendering preferences endogenous without giving up methodological individualism—namely, the necessity of positing an exception to the diversity of behavioural orientations if one wishes to stick to theoretical humanism. In both cases, new institutionalism stumbles upon the logical limits of its methodological commitment to theoretical humanism: on each occasion, the individual subject fails to be the foundational bedrock of socio-economic analysis. These two deadlocks should in fact be seen as the two distinct manifestations of the impasse of the dualism of subject and structure.

In its attempts to evade this double-pronged impasse, the new institutional economics ends up introducing new layers of structures. On the one hand, in order to explain the emergence (and evolution) of institutions, the evolutionary notions of “spontaneous order” are evoked (Sugden 1989). On the other hand, in order to explain the distribution of behavioral traits, the new institutionalist scholars began to flirt with evolutionary mechanisms such as “differential replication” and “natural selection” (Bowles and Gintis 1998). In both cases, and in their various variants, we observe an attempt to supplement
what seems to be a dualist discourse with a further layer of structures (be them in the form of social norms or selection mechanisms). This baroque layering of humanism and structuralism signals that there is a deadlock that resists resolution.

1.3. The power of new institutionalism: Hegemony arising from heterogeneity.

Nonetheless, these impasses do not lead these economists to give up new institutionalism. On the contrary, despite the persistence of these serious methodological deadlocks, despite its apparent heterogeneity, the hegemony of new institutionalism seems to be getting more and more entrenched. What, then, accounts for the success of new institutionalism?

Mirowski and Hands (1998) explain the erstwhile power of neoclassicism by directing our attention to the heterogeneity of the neoclassical approaches. They argue that the uneasy co-existence of the Walrasian, Marshallian, and Samuelsonian approaches rendered the neoclassicism immune to criticism. When some critic of neoclassicism objected to the untheorised psychologism of the concept of utility, the defenders referred to Samuelson’s revealed preference approach; when another critic scrutinized the formalism Arrow-Debreu models, the defenders referred to industry-level econometric studies of Chicago School; when critics questioned the lack of interdependence across different markets, the defenders referred to the general equilibrium models, and so on. This seemingly fragile ecology of skeins of neoclassicism, Mirowski and Hands (1998) suggest, enabled the

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4 See, for instance, the triumphant tone of the contributions by Ronald H. Coase and Douglass C. North to a recently edited volume on new institutionalism (Ménard 2000).
proponents of this tradition to sustain their hegemony within the discipline by continually fending off criticisms.

Therefore, if the earlier neoclassicism was an heterogeneous formation, the contemporary new institutionalism seems to be a fragmentary one. In fact, if anything, the received wisdom regarding the contemporary state of mainstream economics is that the heterogeneity of new institutionalism is a healthy and pluralist antidote to the monochrome austerity of the standard neoclassical model (see for instance, Bowles and Gintis 2000). In this sense, Mirowski and Hands’ ascription of heterogeneity to neoclassicism is indeed against the grain of the prevalent representations of the recent developments within mainstream economics. Taking their compelling analysis, rather than the received wisdom, as my point of departure, I will argue that new institutionalism, despite its apparent heterogeneity, is a much more robust formation compared to the earlier neoclassicism. While the reign of neoclassicism was indeed predicated upon its heterogeneity—with two radically opposed traditions (Marshallian Chicago School and Walrasian Cowles Commission) and a third one occupying the uneasy midpoint (the Samuelson approach)—, the panoply of approaches that will be identified in this chapter under the banner of new institutionalist economics are actually unified around a single constitutive exclusion: the Walrasian general equilibrium model. In fact, I shall argue that new institutionalism is an articulated formation where a series of different economic approaches share a common relation to the Walrasian model. The nature of this relationship is neither one of outright rejection nor one of appreciation, but one of inheritance. Most representatives of the new institutionalism would be very critical of the Walrasian model, nonetheless they betray an uneasy dependence on the model. While
most new institutionalists would decry the absence of realism that characterise the
Walrasian “fiction”, they would still position their theoretical and conceptual innovation
in relation to the Walrasian model (and thereby implicitly accepting its legitimacy in the
final instance). In a sense, for new institutionalist approaches the Walrasian model is an
exception, yet an exception that is necessary for positioning themselves in relation to it, as
a deviation from it, as its *inheritors*.

In this chapter, I will substantiate the thesis that the shift from neoclassicism to new
institutionalism has led to the emergence of what will be tentatively named as the post-
Walrasian condition. The term “post-Walrasian”, in this context, will not refer to a
particular school of thought or approach but to a “condition” where the various elements
of Walrasianism are disassembled and re-considered. While the term post-Walrasian will
be used to designate the state of discontent with the Walrasian research program that has
led to its displacement, the term new institutionalism will be used to designate a series of
seemingly heterogeneous approaches and orientations that has emerged within the
context of post-Walrasian condition. Nonetheless, despite the seeming heterogeneity of
new institutionalism and the illusory sense of permissive liberal pluralism that permeates
the post-Walrasian condition, I shall argue that the latter designates the context within

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5 Because it entails a particular mode of thoroughgoing critical reading, I am hesitant to use the
term “deconstruction”. In contrast to the practice of deconstructive reading, different post-
Walrasian reconsiderations of Walrasianism are persistently pragmatic and selective.
6 The term “post-“ designates neither chronological posteriority nor conceptual superiority, but
conceptual posteriority. More on this in section 5.
which the former, not despite but because of its heterogeneity, has taken over the seat of hegemony and further entrenched the ideology of markets.⁷

Certainly, this narration of the shifts and re-configurations within the mainstream of the discipline of economics will be unique in its use of the Gramscian concepts of hegemonic articulation. Nonetheless, my interest in narrating this transition within the discipline of economics is not merely historical. In fact, I am interested in new institutional economics because its effects extend beyond the confines of the discipline of economics. More specifically, I believe that the strength of the hegemony of the new institutionalism is, in part, conditioned by its success in disseminating its “common sense” behavioural and institutional templates to the rest of the social formation. In fact, the real danger of what is known as “imperialism of economics” is not in the way it colonises other social sciences (political science, sociology, international relations, and so on) but in the way in which it successfully suggests a particular mode of subjectivity and mode of institutional design as the “common sense”, as the “normal” mode of being within contemporary social formations. And it is precisely in this sense, I believe that an account of the historical development of new institutionalism that takes the dualism of subject and structure at its main thread is more urgent than ever.

The chapter is organised as follows. First I will begin with a discussion of the failure of neoclassicism to disentangle itself from the psychologism that haunts it. This discussion will serve several purposes at once: First, it will establish the strength and perseverance of

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⁷ Similarly, new institutionalism is a productive research agenda not despite but because of its double-pronged impasse. The need to keep the different manifestations of these two modes of
the theoretical humanist commitments of neoclassicism. Second, it will introduce the
aforementioned three different skeins of neoclassicism by providing the accounts of the
particular ways in which they have failed to purge psychologism from economics. And
finally, it will establish that the different skeins of neoclassicism has to make an implicit
reference to the subjective states of the individual subjects in order to be able to arrive to
the normative position that they assume (however different be they from one another). In
section three, I will discuss the competitive equilibrium model that lies at the core of the
Walrasian economics. In my discussion, I will argue that, as much as it betrays many
characteristics of theoretical humanism (e.g., exogenous preferences) Walrasian general
equilibrium model, could easily be read as a structuralist model proper. In section four, I
will turn towards the other neoclassical skein, namely the Chicago School. Similarly,
despite its widely known pro-market and methodological individualist affinities, I will
argue that it is possible to locate a strong form of structuralism within the Chicago
School. After completing the analysis of these two skeins of neoclassicism, in section five,
I will proceed to elucidate the elements of the post-Walrasian condition. In section six, by
pulling together the threads that I have elaborated in the preceding sections, I will argue
for the importance of taking seriously the dualism of subject and structure of both
neoclassicism and new institutionalism in order to understand the hegemonic hold of
these mainstream discourses both within and beyond the discipline of economics.

failure at bay is what mobilises the new institutionalist economics.
2. The bête noire of neoclassical economics: Psychologism.

2.1. Introduction: Division and difference within neoclassical economics

According to Philip Mirowski and Wade Hands, the stabilization of the hegemony of the neoclassical economics in the immediate aftermath of the World War II should be characterized as a somewhat paradoxical result of “an interlocking competitive ecosystem” (1998:289), constituted by the mutually constitutive and conflict-ridden rivalry of three distinct schools of thought: the highly mathematical, General Equilibrium approach of the Cowles Commission,\(^8\) the pragmatic, Marshallian applied microeconomics of the Chicago School, and the midway, operationalist, “revealed preference” approach of Paul Samuelson at the MIT (Hands and Mirowksi 1998; Mirowski and Hands 1998; Mirowski 2002). Indeed, these three skeins of neoclassicism could be differentiated from one another along number of different lines such as their epistemological commitments, methodological investments, political and ideological sensitivities, and so on. In fact, as Mirowski and Hands have persuasively argued, the very absence of a fully coherent and sedimented conceptual core may as well be a condition of possibility of the hegemony of the neoclassical economics. Rather than

\(^8\) The Cowles Commission, a think-tank for statistical and mathematical research in economics, was established in 1932. Before moving to Yale University, between 1939 and 1955, it was based at the University of Chicago. Among some of the well-known affiliates of the Cowles Commission are Oskar Lange, Leonid Hurwicz, Jacob Marschak, Trygve Haavelmo, Tjalling Koopmans, Lawrence Klein, Armen Alchian, Kenneth Arrow, Frank Hahn and Gérard Debreu. For a brief assessment of the different ways in which Cowles Commission has been instrumental in giving shape to the Neoclassical formalism of the second half of the twentieth century, see Backhouse (2002). For more a detailed narration, see Mirowski (2002).
making it vulnerable, its internally fractured and fragmented formation has lent neoclassical economics the flexibility to accommodate and respond to its various critics.

In this section, I will try to delineate the differences between these three theoretical strands of Neoclassicism by discerning their distinct approaches to the theory of (consumer) choice. This story of an internally fractured Neoclassical orthodoxy will serve two purposes: First, by discerning the divisions and differences within the Neoclassical orthodoxy, it will set the scene for the story that will be told in what follows. Second, it will trace the history of a persistent uneasiness caused by the accusation of “psychologism” that haunts the utility theory of value. The failure of each strand of neoclassicism to disentangle itself of psychologism, as a symptom of their constitutive commitment to theoretical humanism, enables us to discern the different manifestations of the dualism of subject and structure that is deeply inscribed both within neoclassicism and its heir apparent, new institutionalism.

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9 It must be mention beforehand, however, that the discussions of the Cowles and the Chicago approaches will be considerably shorter in contrast to the longer discussion of the revealed preference approach. This is, in part, due to the fact that the latter represents the most radical attempt to purge neoclassical economics from psychology. Another reason is that the Samuelson approach is the first among these three strands to fall apart (Mirowski 2002:226). Despite it continues to find an awkward place (towards the end of the chapter on the theory of consumer) in almost every graduate microeconomics textbook, its relevance has mostly waned. For this reason, while there will be separate discussions of the Cowles and the Chicago approaches, the discussion of the Samuelson approach will be confined to this section only.
2. 2. Subjectivism in early neoclassicism: The calculus of pain and pleasure.

Today, it is customary to trace back the advent of subjectivism in economics to the writings of Jeremy Bentham and his all-inclusive, hedonistic calculus of pain and pleasure (O’Neill 1998:38). According to Bentham, the hedonistic calculus governs all human exploits—including even ones motivated by other-regarding concerns. The logic of utilitarian calculus maintained that the choices made by the subject are governed by the subjective states (such as pleasure, happiness, well-being) of the subject. Moreover, within this framework, one does not only find an introspective, subjective, and substantive theory of human action but also an index, a common denominator to compare and to add and subtract the magnitudes of utility of different individuals. Indeed, the main concern of utilitarianism was to maximise the total utility of the community (Sen 2002:70). As such, for utilitarians, and for the early neoclassical economists like William Stanley Jevons, Léon Walras, and Francis Edgeworth, the concept of utility was not only the name of an introspective, psychological “substance” upon which one can construct the theory of demand and consumption, but also the universal “measure” of happiness (Lewin 1996). Rather than being a coincidence, this dual role of the notion of utility (individual and social) or any some such representation of the subjective state of well-being, despite all the attempts, will prove to be inseparable from one another.

Towards the end of the nineteenth century, exposed to the fierce criticisms of the American institutionalists like Mitchell and Veblen, some neoclassical economists have begun to feel uneasy with the saturated psychologism of the concept of utility. American institutionalists, inspired by the contemporary developments in then-nascent behaviorist
psychology that emphasized the role of instincts and habits, have begun to argue that the
goal-oriented, hedonistic psychology that informs the marginal utility theory was
unscientific and incapable of understanding the complexity of the human psyche.
Nevertheless, as Shira Lewin cogently argues, for the institutionalists the psychological
critique of neoclassicism was only “a springboard for [their] more important campaign
for the increased study of economic institutions and evolutionary change, rather than the
formulation of more and more [as they saw it] metaphysical, static economic theories
with no empirical content” (1996:1300). In response to this two-pronged attack, the
neoclassical economists opted to engage only with the psychological critique and began to
argue that the economics as they practised it was independent of psychological
assumptions. Rather than abandoning their theoretical apparatus, they insisted that the
economic concepts, laws, and principles (e.g., the principle of diminishing utility) will
apply to each and every individual regardless of his or her psychic composition (Lewin
1996).

2. 3. From cardinalism to ordinalism to behaviorism and back: The
Samuelson approach.

Nevertheless, this sheer disavowal could not continue for too long. In the thirties, the
advent of logical positivism within the neoclassical camp has led many economists to
begin to more rigorously question the psychologism that undergirds the theory of demand
(Lewin 1996). The renowned British economist Lionel Robbins was one of the first
neoclassical economists to publicly criticize the notion of utility as a universal measure of
well-being: “Every mind is inscrutable to every other mind and no common denominator
of feelings is possible”(1932:636). In two years time, John Hicks and R. D. G. Allen
(1934) would publish their version of the theory of demand where the preferences of the
individual subject are represented through the indifference curves (for a succinct historical account, see Backhouse 2000:256). Based on the pair-wise ordering of commodity bundles and thereby evading the cardinal comparison of marginal utilities, the concept of indifference maps has eliminated the need and the possibility of interpersonal comparison of well-being. Moreover, with this ordinalist-turn, the utility function did not only lose its role as the universal index of well-being but also left its place as the subjective foundation of the theory of demand to the binary orderings of preferences. In the new architecture, the concept of utility began to serve a secondary, supporting role to the preference orderings. The utility values are now assigned to different commodity bundles only in order to represent their rankings. More specifically, these values could neither be interpersonally compared nor be interpreted to designate the intensity of preference. Nevertheless, despite this move from the cardinal to ordinal utility theory (or, preference orderings) as the foundation of the theory of demand, the subjectivist, introspective, and, even worse, empirically unobservable nature of this foundation has remained intact (Blaug 1980:165).

The project of purging of the neoclassical economics from the traces of psychologism took a behavioralist-turn when, in 1938, Samuelson has launched the first version of his “revealed preference” approach with the stated aim “to develop the theory of consumer’s behaviour freed from any vestigial traces of the utility concept” (1938:71). According to Samuelson, the primitive concept of the theory of consumption (and therefore, the theory of demand) can neither be the cardinal notion of utility nor the ordinal preference orderings. For Samuelson, even preference orderings, given their introspective nature,
were empirically unobservable, and therefore, they were neither “operationally” useful nor methodologically sound (Hausman 1992:19).

Instead, Samuelson argued, the primitive concept of the theory of demand should be nothing but the empirically observable “choices” (i.e., the actual behavior) of the subject. If a subject chooses the commodity bundle $x$ over another bundle $y$, she has revealed a preference for $x$ over $y$. In particular, according to the Weak Axiom of Revealed Preference (WARP), if the subject reveals a preference for $x$ over $y$, she must not reveal a preference for $y$ over $x$. The choices of this subject will be consistent as long as they satisfy the WARP. Consequently, the argument went, as long as the choices of a subject satisfy the WARP, it is possible to construct a complete, transitive, and continuous (revealed-)

preference ordering from them (Hausman 1992; but also see Sen 1973/1986 on completeness). Therefore, with Samuelson’s revealed preference approach, rather than deriving the choices from the preferences (and the endowments), one began with the “empirically observable” choices and the endowments and then took a detour back to the (revealed) preferences only to resume business as usual, i.e., to re-construct the unscathed architecture of the theory of demand.\(^\text{11}\)

\(^{10}\) Samuelson’s “operationalist” program demanded that the scientificity of an economic theory (or any theory) should be assessed on the basis of its intersubjectively observable, empirical consequences. Empirically invalid or untestable portions of a given theory should be discarded. Hence, the desire to discard the introspective portions of theory of choice. For further discussions, see Mirowski and Hands (1998:282), Blaug (1980:99-103), and Hausman (1992:156-8).

\(^{11}\) This description glosses over the twists and turns in Samuelson’s own understanding of the “revealed preference approach” and the role it plays in the theory of demand. According to Wong’s (1978) narrative, Samuelson has begun his journey in 1938 with a radically
What attempted to be surgically removed from the neoclassical theory of choice in the process are the methodologically suspect, vestigial traces of psychologism. Whether or not it was a successful operation, even the very conceptual shift towards an understanding of the preference orderings “as reflections of choice rather than determinants of it” (Amariglio and Ruccio 2001:152) deserves to be interpreted as a significant symptom of a not-so-unconscious desire to emancipate economics from psychology. According to the revealed preference approach, the starting point of the theory of demand was simply the choices of the individual; behind the act of choice, there was nothing, neither utility nor preferences. As such, according to this approach, when a subject chose $x$ over $y$, this did not mean that this choice has improved his or her well-being. Any form of revealed preference ordering, as long as it complied with the conditions of internal consistency (the WARP), would have worked for the revealed preference approach.

And finally, Mirowski and Hands (1998) argue that, in developing the revealed preference approach, one other objective of Samuelson was to provide an empirical grounding for “operationalist” objective of demonstrating that in constructing the demand function there is no need to refer to unobservable concepts like utility or preference. Ten years later, in 1948, abandoning the initial objective of complete eradication of psychologism, he described the revealed preference approach as a means to reconstruct the Hicks-Allen ordinal utility theory in an empirically grounded manner. And, finally in 1950, he would grant that the revealed preference approach is observationally and logically equivalent to the ordinal utility theory. It is possible to read these re-interpretations and secondary elaborations as various attempts to domesticate the radical and somewhat traumatic nature of the 1938 purge. Similarly, Hicks, who initially endorsed the revealed preference approach as “the study of human beings ‘only as entities having certain patterns of market behavior; it makes no claim, no pretense, to be able to see inside their heads’” (Sen 2002:124; internal quote is from Hicks 1956:6), has become, later on, less enthusiastic and more doubtful (Sen 2002:124).
the theory of demand at the level of its theoretical foundations. In this way, as long as the preference orderings of the consumers were grounded in the observable data derived from the actual choices of the individual consumers, there would be no need to test the empirical validity of the downward-sloping demand functions that are derived from the revealed-preferences.\textsuperscript{12}

Despite all its promise to purge the economics from psychology, the revealed preference approach is largely seen as a failed project. Lewin (1996:1316) argues that “the revealed preference approach had proved empirically useless.” Similarly, Sen (1973/1986) points out to a number of practical and logical problems pertaining to the process of construction of (revealed-)preferences from choices. In particular, he refers to a possible case where absence of choice may either mean indifference or incompleteness.\textsuperscript{13}

Moreover, and perhaps more radically, Sen argues that the consistency property implied by the WARP can only make sense if “choices” are based on something other than themselves:

Preferring $x$ to $y$ is inconsistent with preferring $y$ to $x$, but if it is asserted that choice has nothing to do with preference, then choosing $x$ rather than $y$ in one case and $y$ rather than $x$ in another need not necessarily be at all inconsistent. What makes them look

\textsuperscript{12} Econometric estimation of the demand functions was the ultimately failed research agenda of Henry Schultz (together with his correspondent Harold Hotelling), and, after his untimely death in 1938, of many other researchers at the Cowles Commission until they grew tired of it in the late forties (Mirowski and Hands 1998). See also, footnote 5, below.

\textsuperscript{13} Completeness implies that the subject either prefers $x$ to $y$, or prefers $y$ to $x$, or is indifferent between $x$ and $y$. If the subject does not choose between two options, this could be interpreted either to imply that she is indifferent between them or her preferences are not complete. To assume that the lack of choice implies indifferent is already assuming “something” about what is behind the choices.
Sen’s insistence on preserving the ultimately introspective notion of preference as a concept distinct than and anterior to the notion of choice runs against the behaviorist project of Samuelson’s 1938 paper. A more detailed discussion of the reasons behind this insistence will have to wait till later and, without doubt, that discussion will need to bring together Sen’s work on rationality, ethics, and capabilities approach to welfare. But ultimately, Sen is a student of social choice theory and the foundational text of the latter approach is written by Arrow (1963) and was published as a part of the monograph series of the Cowles Commission. In order to begin to understand the persistent need to preserve the introspective notion of preferences (or some such mental state), we will need to discuss the Cowles approach.


In contrast to Samuelson’s operationalist desire to eradicate any residual conceptual dependence on the subjective and introspective preferences, the Bourbakist formalism of Cowles Commission had no interest in rendering the foundations of the theory of demand empirically verifiable. Even in the late thirties and early forties, when one of the central projects of the Cowles Commission was the econometric estimation of interdependent demand curves, unlike the Samuelsonian path, the objective was never to render the foundations of the demand curve empirically testable but to estimate the demand curves within the Walrasian general equilibrium context. This emphasis on Walrasianism was a product of the theoretical and political interests of the early affiliates of the Commission like Lange, Marschak, and Koopmans. In particular, Lange was a
committed Marxist and one of the main protagonists of the socialist calculation debate. The market socialist model he defended (1938) was an application of the Walrasian general equilibrium model. During his tenure at the University of Chicago, while Frank Knight, the doyen of many pro-market Chicago economists, was criticizing the welfare implications of the recent (and soon to be codified as the mainstream) approaches to the neoclassical theory of demand that are being elaborated in the writings of Hicks, Eugen Slutsky, and Schultz, Lange, despite being a committed Marxist, was teaching Hicks’ *Value and Capital* (Mirowski and Hands 1998:268). Indeed, the signature contribution of the Cowles Commission to post-WWII neoclassicism was the development of the formal mathematical models of the general competitive equilibrium derived from the Hicks-Allen-Slutsky theory of demand (Arrow and Debreu 1951; Debreu 1959; Arrow and Hahn 1971).

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The theory of consumer, in the general equilibrium models of the Arrow-Debreu vintage, begins with the preference orderings. Building up the architecture of the theory of demand on the ordinal utility theory, a significant aspect of these models, at least for the purposes at hand, is their need to refer to the subjective and introspective realm of the

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14 In fact, until late 1952, the motto of the Cowles Commission was “Science Is Measurement” and the econometric estimation of “the Walrasian systems of demand equations” and the “modularized” Keynesian macroeconomic models was the central part of its research agenda. However, throughout the 1940s, in part, due to the repeatedly disappointing results in delivering meaningful statistical results, in part, due to the growing discomfort with its characterization as the “ground zero of market socialism”, and, in part, due to the financial needs that led them to seek funding from US military, the Cowles Commission has moved towards more abstract mathematical models with little interest in their empirical validity. In 1952, the motto of the
human psyche. The preferences of the subject were not only taken as the rock bottom of the theory of demand, but also they were assumed to be representing the welfare of the subject. This assumption is crucial for the normative conclusions of the Arrow-Debreu model. Since the normative implications of the Arrow-Debreu model will be discussed in length in section 3 below, it will suffice to sketch the argument in a rudimentary form here. The basic premise of the Arrow-Debreu model is to prove that a decentralized economy with a large number of self-interest seeking economic agents (consumers and producers) can generate an orderly outcome where all markets clear (i.e., the existence of general equilibrium) and where this outcome will be pareto optimal (i.e. the efficiency of general equilibrium). In particular, “the optimality of the equilibrium, i.e., whether the market can lead to a position which yields maximal social welfare in some sense, is […] examined in terms of preference with the convention that a preferred position involves a higher level of welfare of that individual” (Sen 1973/1986:73). In other words, in order to substantiate its basic normative conclusions (i.e., the desirability of equilibrium), the Arrow-Debreu model has to rely on a residual argument pertaining to the psychic, subjective state of the subject.

Another landmark contribution of the Cowles Commission to the neoclassical discursive formation is Arrow’s Social Choice and Individual Values (1963; first published in 1951). In this document, Arrow explores the formal aspects of construction social welfare function by aggregating individual preference orderings. Based on a limited number of assumptions regarding the aggregation procedure, Arrow investigates whether it is

possible to reach an aggregate social preference ordering (that satisfies the consistency criterion of transitivity). On the face of it, Arrow takes the individual preference orderings as inviolate; the condition of unrestricted domain imposed on the aggregation procedure permits all possible preference orderings. Some have argued that by adopting an ordinalist approach to preferences, Arrow “takes over the behavioralist approach that provided its motivation and logic” (Weale 1992:215). The condition of independence of irrelevant alternatives does indeed rule out any form of cardinalization. Moreover, Arrow notes that:

It is assumed that each individual in the community has a definite ordering of all conceivable social states, in terms of their desirability to him. It is not assumed here that an individual’s attitude toward different social states is determined exclusively by the commodity bundles which accrues to his lot under each. It is simply assumed that the

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15 The Arrow Impossibility Theorem states that the there is no aggregation procedure that can satisfy the conditions of unrestricted domain, Pareto inclusiveness, independence of irrelevant alternatives, and non-dictatorship and produce social preference ordering that is complete and transitive. The condition of unrestricted domain states that the aggregation procedure should be able to accommodate all logically possible orderings by individuals. The condition of Pareto inclusiveness states that if all individuals prefer x over y, then society should also prefer x over y. The condition of independence of irrelevant alternatives states that the social preference between two alternatives should depend solely on how individuals rank these two alternatives. The condition of non-dictatorship states the social ordering should not coincide with the ordering of a single individual regardless of what others may think. The proof of the theorem states that given the objective of constructing a rational (complete and transitive) social ordering out of individual, it is impossible to construct a social ordering “without making that ordering coincide in all respects with the preference ordering of just one of the individuals” (Weale 1992:210). A very useful and clear discussion of the subject can be found in Sen (1970). But also, see Weale (1992) and Mueller (1989:384-407). For an interpretation of the political implications of this theorem, see footnote 16, below.
individual orders all social states by whatever standards he deems relevant. (1963:17; emphasis added.)

The emphasis on ordinality, combined with this broadening of the motivational basis of the preferences of the subject, does indeed suggest that the approach has no need to refer to the psychic states of the subject (see also, Hardin 2001). Nevertheless, elsewhere, Arrow also suggests that “[t]he ability to make consistent decisions is one of the symptoms of an integrated personality” (1963:2). The condition of consistency (as a combination of the three basic axioms of rational choice, namely, reflexivity, completeness, and transitivity) is seen as the single most important attribute of psychically integrated personality. As it is suggested by Sen (see the quote above in subsection 2.3), to be able to speak about consistency, one needs to take a peek into the mind of the individual subject. Moreover, in tandem with Arrow’s work in general competitive equilibrium (see below, section 3), the very raison d’être of the project of constructing a consistent social welfare function out of individual preference orderings is predicated upon some sort of residual link between the preferences and the well-being of the subject. By using the term “desireability” in individual motivations behind the preference ordering, I believe, Arrow betrays the dependency of his project to such a link.16

Unlike the earlier versions of welfare economics, Arrow insisted on using the ordinal approach to preferences. This may, in part, be explained by referring, as Arrow does, to

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16 It may be argued that formally speaking there is no necessity to link the preference of the subject to her desires or well-being. Nevertheless, even such a formalist treatise like Arrow’s is predicated upon a discursive (in the narrow sense of the term) motivation. Therefore, even though this residual psychologism may be irrelevant to the actual formal manipulations, it is, I am arguing, indispensible to the very project of social choice theory.
the conceptual difficulties involved in the measurement, comparison, and aggregation of utilities. In particular, Arrow insisted that there is nothing that the indifference curve approach cannot explain that the cardinal calculus of utility can (1963:9). Nevertheless, one other aspect of this “revealed” preference for ordinality, one that is more salient for understanding the political heterogeneity of different neoclassicisms, may be found in Arrow’s aversion to “non-democratic” central-planning models of socialism. Dennis Mueller (1989:394-5) argues that, for Arrow, allowing public officials “to engage in cardinal, interpersonal utility comparisons would vest them with a great deal of discretionary power and might be something to be avoided”. This political commitment, as it will be discussed in some depth in the next section, comes not so much from a Chicago School style pro-market and anti-socialist sentiments, but from a somewhat subdued commitment to a liberal democratic market socialism, or social democracy: The project of aggregating individual preferences without reverting to “dictatorship” or “customs” is informed neither by a conservative desire to legitimise capitalist liberal democracies nor by a “socialist” desire to legitimise central planning but by a modernist desire to design social and economic institutions that can facilitate the rational governance of the society.17

17 In this context, it might be useful to discuss, in some length, Mirowski’s interpretation of the Arrow Impossibility Theorem (2002:302-308). Mirowski argues that the Arrow’s theorem “was a direct product of Cowles’s participation in the socialist calculation controversy” (2002:302). He also reminds that the theorem was a response to a military problem Arrow encountered at his stay at the RAND Corporation (a patron of the Cowles Commission in the Postwar period): Arrow was “troubled” by the way in which researchers at RAND were constructing game theoretic models of the interactions between nation-states and was inspired to systematically study the conditions under which of the axioms of individual rationality can be applied at the level of social
2. 5. “Just do it!” The Chicago approach.

To recapitulate, while the revealed preference approach tried to construct a empirically verifiable theory of choice, the Cowles approach aimed to axiomatize the theory of choice as an integral part of general equilibrium model of the economy. In contrast to these attempts to move away from the calculus of cardinal utility, for the representatives of Chicago School like Frank Knight, George Stigler, Milton Friedman, and Gary Becker, both the “operationalist” revealed preference approach of Samuelson and the formalist axiomatization of the theory of choice at the Cowles Commission were, at best, unnecessary detours. Rejecting both the operationalist and formalist variants of aggregates like community, nation, and so on. The Arrow Impossibility Theorem states that given the limited number of “reasonable” conditions (see footnote 14 above), “the doctrine of voter’s sovereignty is incompatible with that of collective rationality” (Arrow 1963:60). Accordingly, Mirowski interprets the Arrow’s theorem as a demonstration of the superiority of central planning and the inefficiency (irrationality) of the democratic politics. At this point, it might be relevant to note that the theorem applies mutatis mutandis to all democratic communities, ranging from nation-states to town councils to democratic workplaces.

It is impossible to argue against the relevance of this text to the socialist calculation controversy. Nevertheless, it is also rather difficult to read this text as an ode to central planning. First of all, the aforementioned emphasis on the ordinality, if it is not simply a rhetorical device, attests to Arrow’s respect for individual freedom and democratic values. But more importantly, it might be more fruitful to read this text as an attempt to begin to think through formally the conditions of possibility of the politics of market socialism or social democracy. In this vein, I suggest to read Arrow’s text retrospectively, in light of Sen’s Collective Choice and Social Welfare (1970). In concluding this explication de texte, Sen suggests that the various impossibility theorems (including Arrow’s) that he discussed “are to be viewed not as arguments for nihilism, but as positive contributions aimed at clarifying the role of principles in collective choice systems” (1970:199). Of course, the question as to whether or not the highly modernist project of social choice theory in general can respond to Hayek’s critique of socialist planning remains to be answered. And such an answer would probably be in the negative (see Adaman and Devine 1996).
foundationalism, the Chicago School distinguished itself with its peculiar sort of pragmatism (McCloskey 1988:288). This Chicago-style pragmatism got codified in Friedman’s famous essay on the methodology of positive economics:

[T]he relevant question to ask about the “assumptions” of a theory is not whether they are descriptively “realistic,” for they never are, but whether they are sufficiently good approximations for the purpose in hand. And this question can be answered only by seeing whether the theory works, which means whether it yields sufficiently accurate predictions. (1953:15)

The particular “assumption” that Friedman was referring to in this essay pertains to the behaviour of the “entrepreneur”. In a nutshell, Friedman argued that, as long as a theory based on the assumption that the entrepreneurs will act on the principle of “rational and informed maximization of returns” will furnish us with “accurate predictions,” it really does not matter whether or not each and every entrepreneur do so. Indeed, this “irrelevance-of-the-assumptions” thesis enabled Friedman to rebuttal three distinct methodological approaches at once: the substantivism of the American institutionalists, the operationalism of Samuelson, and the formalism of the Cowles Commission. It will probably suffice to quote Friedman, albeit somewhat extensively, to see how he deployed his methodological approach as a response to the criticisms of American institutionalism:

Economics is a “dismal” science because it assumes man to be selfish and money-grubbing, “a lightning calculator of pleasures and pains, who oscillates like a homogeneous globule of desire of happiness under the impulse of stimuli that shift him about the area, but leave him intact”; it rests on outmoded psychology and must be reconstructed in line with each new development in psychology; it assumes men, or at least businessmen, to be “in continuous state of ‘alert,’ ready to change prices and/or pricing rules whenever their sensitive intuitions…detect a change in demand and
supply conditions”; it assumes markets to be perfect, competition to be pure, and commodities, labor, and capital to be homogeneous.

As we have seen, criticism of this type is largely beside the point unless supplemented by evidence that a hypothesis differing in one or another of these respects from the theory being criticized yields better predictions for as wide a range of phenomena. Yet most such criticism is not so supplemented; it is based almost entirely on supposedly directly perceived discrepancies between the “assumptions” and the “real world.” (1953:30-1)

If these highly stylized institutionalist critiques of the “orthodox” economic theory that are sardonically re-staged by Friedman are “largely beside the point”, what about the operationalism of Samuelson and the formalism of the Cowles Commission?

In order to begin to answer these question, one needs to recall that for the Chicago School there is no reason to go behind the demand curve; the downward sloping demand curve is the last instance of the Chicago version of neoclassical theory of price. For instance, in his discussion of the Marshallian demand curve Friedman (1953:47-99; original published in 1949) did not refer to the indifference maps. When he used the assumption of utility maximisation subject to budget constraint, he did not bother to empirically or axiomatically justify it. A decade or so later, another Nobel Laureate Chicago economist, Becker (1962) will argue that in order to derive the downward sloping aggregate demand curve for a commodity, as long as the budget constraint limited the opportunity set of the individual subjects, no assumptions regarding their rationality need be made (for a more rigorous discussion, see Section 4 below).

Consequently, viewed from the perspective of the Chicago School, both the operationalist agenda to render the foundational assumptions of the theory of demand empirically
verifiable and the formalist agenda to axiomatize the theory of choice appears redundant. If a theory will work only when its predictions are accurate but not necessarily when its assumptions are realistic, then Samuelson’s revealed preference approach is, methodologically speaking, a dead end (see Wallis and Friedman 1942). Similarly, the Cowlesean project of the axiomatization of the theory of choice is also missing the point. The task of an economists is not to construct impeccably formalized mathematical models; rather economists should divert their energies to produce economic models that “yields good predictions”.

Nevertheless, this latter divergence of opinion regarding the virtues of formalism was only the tip of the iceberg. A much deeper fault line runs between the Cowles Commission and the Chicago School. In fact, as it is suggested above, throughout the late thirties and early forties, econometric estimation of interdependent demand functions was one of the central research agendas of the Cowles Commission and the shift towards the axiomatization of general equilibrium models was to a large extent Postwar phenomenon. However, as it is noted above, the Cowles Commission has always been a hotbed of the Walrasian approach to economic analysis. In contrast, the Chicago School, with its stress on empirical observation and distrust towards excessive formalization, with its insistence on industry-level as opposed to firm or economy-level analyses, with its aversion to abstract general equilibrium analysis in favor of applied analyses of particular markets, can justifiably characterized as Marshallian.¹⁸

¹⁸ Friedman’s identification with the Marshallian project is well documented (Hammond 1998:197-200). Friedman used the term “Marshallian” in order to distinguish the Chicago approach from the Walrasian approaches to economic analysis. While he found the partial versus general equilibrium distinction to be false (Friedman 1953:89), this can be read as a rhetorical
The pro-market affinity of the Chicago approach is well known. In this context, this affinity entails that, for the Chicago School, the markets are everywhere and, with “varying degrees of efficiency,” always work. The commitment to this assertion does not imply that the information is always complete, or the transactions are costless; it simply means that markets work around them, incorporating costs involved in attaining the relevant information and conducting the necessary transactions (Becker 1976:6-7). Underlying this commitment, of course, is the incessant application of the maximizing behavior, “be it the utility or wealth function of the household, firm, union, or government bureau that is maximized” (Becker 1976:5). Consequently, the markets (real or virtual), to the extent that they are unimpeded, because they always facilitate the maximizing behavior, will always maximize welfare.

Given its pragmatist methodology, it is usually suggested that, for the Chicago School, the utility concept is simply a pragmatically useful, expository device, a “convenient fiction” (Mirowski 2002:204). Nevertheless, this would entail neglecting the importance of the notion of utility (or wealth) maximization for the derivation of the welfare implications.

move to highlight what he considered to be a more important distinction between these two approaches: “The important distinction between the conceptions of economic theory implicit in Marshall and Walras lies in the purpose for which the theory is constructed and used. To Marshall economic theory is ‘an engine for the discovery of concrete truth.’ […] Economic theory, in this view, has two intermingled roles: to provide ‘systematic and organized methods of reasoning’ about economic problems; to provide a body of substantive hypothesis, based on factual evidence, about the ‘manner of action of causes.’ In both roles the test of the theory is its value in explaining facts, in predicting the consequences of changes in the economic environment. Abstractness, generality, mathematical elegance—these are all secondary, themselves to be judged by the test of application. The counting of equations and unknowns is a check on the completeness of reasoning, the beginning of analysis, not an end in itself” (Friedman 1953:90-91).
that would secure the normative justifications of their commitment to markets. As it is suggested above, the Chicago School is committed to the idea that markets always produce efficient outcomes. More specifically, the markets can maximize “social” welfare only to the extent that they enable the individual subjects to maximize their own welfare. As such, to be able to derive their welfare conclusions and policy recommendations, they must rely on a notion of preferences that represents a subjective and introspective notion of individual welfare. The fact that the proponents of the Chicago School do not acknowledge this link openly is not relevant. The concepts of utility and vague references to some psychology remain to be indispensable for the Chicago-style neoclassicism.\textsuperscript{19}

2. 6. Conclusions.

This brief account of the different strands of neoclassicism demonstrated that, despite its attempts to eradicate its embarrassing references to a substantive theory of human psyche, neoclassicism, in order to be able to derive its normative positions and policy recommendations, continues to betray a persistent need to peek into mind of the individual subject. This commitment to theoretical humanism is indeed the common denominator of the three skeins of neoclassicism. As it will be further elaborated in section 5, to the extent that new institutionalism is a continuation of the neoclassical project (to the extent that it is possible to define a singular project), this enduring

\textsuperscript{19} In a revealing passage, Becker compares his approach with one of “modern psychology”: “Moreover, the economic approach does not assume that decision units are necessarily conscious of their efforts to maximize or can verbalize or otherwise describe in an informative way reasons for the systematic patterns in their behavior. Thus it is consistent with the emphasis on the subconscious in modern psychology and with the distinction between manifest and latent functions in sociology” (1976:7). See also Lewin (1996:1318-9).
commitment to a rational, centred, and introspective individual subject will re-surface again and again.

What accounts for this unwelcome persistence of psychologism? The central tension can be located in the journey that needs to be taken from the decentralised yet interdependent actions of individual subjects to the aggregate outcomes at the level of the economy. The psychologism serves, ideally speaking, the function of an anchor that would secure the socially desireable outcomes at the level of the economy. Nonetheless, this journey from the subject to structure has always been a rather difficult one. In fact, for neoclassicism, or at least in its Walrasian variant, psychologism is the least significant of the problems that it needs to confront in its journey from the subject to the structure.

The genealogy of new institutionalism will be traced back to the tensions between the Chicago School and the Cowles Commission. In the next section, we will dissect the single most important contribution of the Cowles Commission to the twentieth century neoclassical economics, namely the Arrow-Debreu model. After a close analysis of this model as a structuralist model par excellence, we will look at the structuralism of the Chicago School, namely their selection arguments. From these two strands we will reconstruct new institutionalism as a heterogeneous discursive formation, where subject-structure dualism reproduces itself in several different sites: transaction costs approach, non-cooperative game theory, neo-austrian approach to spontaneous orders, public choice school of government failures, new economics of everything, evolutionary economics, and finally experimental economics.

3.1. Introduction: The “foundational fantasy” of neoclassicism.

The “foundational fantasy” of neoclassicism is the possibility of achieving a general, economy-wide, equilibrium as an unintended consequence of the independent, decentralized, and self-interested activities of individual economic agents. This foundational fantasy received its early mathematical formulations at the turn of the twentieth century, in the writings of Leon Walras and Vilfredo Pareto. In Walras, we find the formulation of the possibility of an equilibrium price vector that will clear simultaneously all the markets in a market economy. Pareto’s contribution lies in his formulation of the notion of Pareto optimality. A Pareto optimal allocation of resources refers to a state of the economy where there is no way in which to reallocate the resources without making anyone worse off. These two concerns will find their precise mathematical formulations in a series of papers and monographs written by Kenneth Arrow, Gérard Debreu, Frank Hahn, and Lionel W. McKenzie in the mid-twentieth century. In these high modernist, mathematical studies—to a large extent financed by the Cowles Commission—, not only the existence of an equilibrium price vector has been proven, but also the efficiency (in the sense of pareto optimality) of such equilibria was established.

In what follows I will begin with a description of the Arrow-Debreu general competitive equilibrium model. After describing the particular representation of the economy in these models, I will look at the particular ways in which they render the economy an object of government intervention. And finally, I will provide a reading of the Arrow-Debreu model as a structuralist model of the economy. While I maintain that it is
possible to read the general equilibrium model as a structuralist model of the economy, I will deliberately refrain from asserting this as the ultimate truth of the model. Indeed, not only will I maintain that it is equally possible to read the model as a humanist (or, individualist) one, but I will also argue that the very possibility of such orthogonally different readings is itself a symptom of the dualism of subject and structure that is inscribed within the theoretical edifice of neoclassicism.

3.2. The structure of the Arrow-Debreu model.

Debreu’s monograph *Theory of Value: An Axiomatic Analysis of Economic Equilibrium* (1959) has a very minimalist structure. Opening with a self-contained axiomatic introduction to topology, it proceeds to specify the notions of commodities and prices. After specifying the axiomatic properties of producers and consumers, the text establishes the existence and optimality of an equilibrium price vector. In what follows, the structure of Debreu’s canonical exposition will be used as the roadmap.  

*Commodity space* Within the conceptual space of Debreu’s axiomatic treatment, “a commodity is a good or a service completely specified physically, temporally, and spatially” (Debreu 1959:32). This notion of commodity is very critical, as it enables the conceptual transformation of a heterogeneous mass of “things” into logical “objects”:

Objects are defined as logical entities as opposed to things, which are empirical...[T]he abolition of the thing, the suppression of all its attributes [gives] rise to a logical object (Copjec 1994:171-2).

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20 In this chapter, in elucidating the basic attributes of the structure of the Arrow-Debreu model, I will primarily refer to Debreu’s presentation.
By establishing the commodity space, Debreu can bring almost everything into its purview, as long as they are properly specified with respect to their physical properties, location, temporal coordinates, and so on (e.g., a black umbrella, on May 11, 2005, in Northampton, MA), into the capture of the general equilibrium model. Specification of the temporal dimensions of a commodity, enables the Arrow-Debreu model to incorporate “saving, or lending of money […] as the purchase today of a particular future dated commodity” (Geanakoplos 1989:44). Specification of its location provides the opportunity to include the transportation costs into the price of the commodity. Furthermore, this elasticity of the notion of commodity (due to the fact that it is a “logical object” rather than a “thing”) makes it possible incorporate an unwanted good, an externality as its absence: the commodity being “the absence of the ‘bad’” (Bergstrom 1989:154). More importantly, for the Arrow-Debreu model, the commodity—what is being purchased as an input either by a producer or a consumer—is ambiguity-free and the commodity space flexible enough both to be infinitely inclusive and temporarily infinite.

Production In the model, the producers are conceptualized as economic agents that choose a production plan (into the future), namely a plan that specifies the quantities of all its inputs and outputs, that will maximize profits. As such, in the Arrow-Debreu model, the process of production, as a process of transformation of inputs into outputs, does not exist. Similarly, the technology is exogenously given and production functions are assumed to be convex. The assumption of convexity imposes strong restrictions on the model: Neither indivisibility of output nor increasing returns to scale in production are permitted.
In short, for the Arrow-Debreu model, the production is a frictionless, automatic process of optimization.

Consumption The theory of consumption, on the other hand, presents a much more interesting picture. This may, in part, be due to the choice-theoretic nature of the Arrow-Debreu model. After all, in the model, even production is framed as a matter of choice among production plans. To begin with, in a structure parallel to the production, the consumer does not choose a single consumption bundle but chooses a complete consumption plan according to her preferences: “Notice that in general equilibrium consumers make choices between entire consumption plans, not between individual commodities” (Geanakoplos 1989:45). Preferences should be complete, reflexive, transitive, continuous, insatiable, and convex. While assumptions pertaining to completeness, reflexivity, and transitivity are seen to be the basic assumptions of economic rationality, the insatiability and convexity are necessary specifically for proving the existence of the equilibrium price vector. The key point here is the replacement of utility maximisation with rational choice as the bedrock of theory of consumer. In the Arrow-Debreu model, following the Hicks-Allen ordinalist turn, the utility maximisation is deduced from the preferences. As it is already noted, by disentangling utility maximisation from rational choice, the Arrow-Debreu model attempts to escape from the uncomfortable psychologism of grounding the demand function in utility theory (Amariglio and Ruccio 2001).

\[21\] In particular, if the axioms of reflexivity, completeness, and transitivity hold, the individual has a preference ordering, if the axiom of continuity also holds, the individual’s preference ordering
Equilibrium  In the Arrow-Debreu model, no producer or consumer can arrive to a final plan without it being adjusted to everyone else’s plans. In other words, all plans are interdependent: As in structuralism proper, the “knowledge of any one element is conditional upon knowledge of the system (Descombes 1980: 87)” . Moreover, what we are speaking of here is a structural relationality that is suspended in a non-temporal, synchronic freeze:  In the Arrow-Debreu model, “all markets open simultaneously, and once only; when a complete set of equilibrium contracts is in place, they all close—forever” (Loasby 1999:108). Since both production and consumption plans are into the future, once they are chosen in a way that permits all markets to clear, there will be no need for markets anymore. The remaining task for each producer and consumer is to routinely carry on their already set plans into the future.\footnote{In other words, the General Equilibrium Model, like Saussure’s linguistic structuralism, is ultimately a synchronic model. In fact, in trying to explain the synchronic emphasis of the early linguistic structuralism, Jean Piaget (1968:77) argues that “[Saussure] drew his inspiration partly on the language of psychology. He strove to establish a pure science of communication, an empirical science of signs and their use. He aimed to create an ‘ontology of language’ that would be an independent science of signs and a science of the linguistic act. He believed that language should be studied as an object in itself, independent of the mind, of the body, and of the external world.”} Consequently, the Arrow-Debreu model has very little to say about the actual process of emergence of the equilibrium price vector. The metaphor of Auctioneer is invoked in order to motivate the \textit{tâtonnement} (a French word meaning ‘groping’ as in ‘groping one’s way in the dark’) process through which the suppliers and the buyers modify their plans (in relation to everyone else’s plans) until the equilibrium is finally reached. During the non-temporal process of tâtonnement no transaction takes place. Every time the auctioneer announces a price vector, production and consumption plans are modified can be represented as a utility function (Hargreaves Heap 1992:6). Formal definitions of these axioms may be found in the appendix to the chapter.\footnote{In other words, the General Equilibrium Model, like Saussure’s linguistic structuralism, is ultimately a synchronic model. In fact, in trying to explain the synchronic emphasis of the early linguistic structuralism, Jean Piaget (1968:77) argues that “[Saussure] drew his inspiration partly on the language of psychology. He strove to establish a pure science of communication, an empirical science of signs and their use. He aimed to create an ‘ontology of language’ that would be an independent science of signs and a science of the linguistic act. He believed that language should be studied as an object in itself, independent of the mind, of the body, and of the external world.”}
accordingly. The process continues until the economy reaches an equilibrium.

Nevertheless, there is nothing that guarantees the convergence towards the equilibrium. In this sense, even though the Arrow-Debreu model proves that it is possible to reach an equilibrium and that this equilibrium will be Pareto optimal, neither the uniqueness nor the stability of the equilibrium can be established without further and unsatisfactory restrictions on the model (Hahn 1984).

3.3 Socialism(s) of the Cowles Commission.

The Arrow-Debreu model offers two theorems (also known as the Fundamental Theorems of Welfare Economics) pertaining to the efficiency of the markets (Debreu 1959:90-7). The first theorem shows that under the given assumptions pertaining to the commodity space, production, and consumption, all competitive equilibria are Pareto optimal. Therefore, in cases when the specified conditions cannot be satisfied (e.g., when there are externalities, when certain public goods cannot be provided by competitive markets), government intervention may be warranted. The second welfare theorem, on the other hand, shows that every Pareto efficient state is an equilibrium attainable through competitive markets. This theorem implies that “any desirable final allocation of resources and commodities requires ‘only’ a redistribution of private ownership rights in the means of production” (Roemer 1995:112).

According to these two welfare theorems, the Arrow-Debreu model, notwithstanding its ultimate failure to come up with determinant theorems, within its conceptual space opens from economics, which in his day chiefly stressed [the laws of equilibrium] (Walras’ and Pareto’s ‘general theory of equilibrium’).”
up room for particular modes of government intervention. The two modalities of government intervention are the correction of market failures and the redistribution of wealth. Indeed, these policy implications have been seen as a sign of the “market socialist tendencies” of a number of economists that were affiliated with the Cowles Commission, a foundation that persistently supported the formalist research in general equilibrium modelling. In particular, for the proponents of the Chicago School, the Arrow-Debreu model and ultimately the whole project of the Cowles Commission was politically suspect. As such, in these years of Cold War, for the pro-market representatives of the Chicago School like Milton Friedman and Gary Becker, not only the mathematical formalism and theoreticist bent of the Cowles Commission was methodologically useless, but also, probably because it renders “the economy” into an exposed object of “social engineering,” the totalising (and perhaps “totalitarian”) vision of the Arrow-Debreu model was deeply suspicious.

In fact, the questions pertaining to the uniqueness and stability of the equilibrium and the logical difficulties involved with the various specifications of the *tâtonnement* process has led

23 Because it is an instance of the effectivity of a discourse in constraining and limiting what is deemed to be possible, or conceivable, channels of intervening into the economy, I would like to take a moment to discern the structure of this “opening”. The Arrow-Debreu model specifies an idealized model of the economy. Consequently, to the extent that these assumptions cannot be met in real-world economies, the door opens for the government to remedy these market “failures”. Without doubt, what is “failure”, and therefore, needs to be “remedied” is determined retroactively, only after establishing, within theory, what counts as the proper functioning of the economy. Consequently, the remedies are themselves designed to mimic the idealized vision of the economy. This constitutes a perfect example of the way in which the modes of intervention to the economy are overdetermined by the particular conceptualisation of the economy.
some to argue for the necessity of actual non-market institutions to usher the economy towards the equilibrium:

…the foregoing models are […] incomplete as competitive tâtonnement models, and that to make them complete it is necessary to provide them with a central market authority and the tâtonnement rules and procedures that it enforces. (Walker 1972:353)

It is precisely in this sense, Oskar Lange’s model of socialist planning (1938), with the Central Planning Board occupying the position of the Auctioneer, was considered to be the unquestionable proof of the socialist tendencies of the Cowles Commission and the Walrasian research agenda.24 The Walrasian model, instead of demonstrating the virtues of private capitalism, again and again provided the theoretical justifications for varying degrees of government involvement in the economy. Whether we take its more timid, interventionist implications or its full-blown market socialist models, Walrasian research agenda has been seen, at least in its heyday during the post-war years, as the advocate of a particular modernist distrust in the social benefits of unregulated markets and private capitalism.

3. 4. Structuralism of the Arrow-Debreu model: The case of the ‘missing’ structure.

In their innovative reading of the Arrow-Debreu model, Jack Amariglio and David Ruccio (2001; 2002) argue that, contrary to numerous critical accounts that narrate the

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24 Mirowski (2002:232-308) traces the links between Lange’s earlier work on market socialism and the subsequent works of a number of other affiliates (e.g., Jacob Marschak, Tjalling Koopmans, Lawrence Klein, Kenneth Arrow) of the Cowles Commission. These scholars were highly fascinated by the social engineering aspect of market socialism; their desire was to construct mathematically tractable models that will enable them to specify the appropriate ways in which to intervene into the economy.
disappearance of the body in modern economics, the fragments of a discourse of the body can be gleaned from the texts of the highbrow neoclassical theory. Instead of a centred, coordinated, and hierarchically ordered body of the Classical Political Economy, in the Arrow-Debreu model they find “a diverse set of bodily surfaces that are written on and of bodily functions and orders that are invoked as economic agencies in their own right” (2001:156). According to Amariglio and Ruccio (2001:158), in their attempt “to displace the deep, hierarchical ordering of the body in favor of theories of consumption, production, and distribution based on the horizontal linkages among a wide variety of bodily functions,” Arrow, Debreu, and others have led “to view of the differentiated and dispersed (what [Amariglio and Ruccio] prefer to call a postmodern) body”.

While their reading of the Arrow-Debreu model shifts the co-ordinates of the debate and, in part, enables the reading that will be proposed momentarily, I find myself in disagreement with their attribution of postmodern-ness to the model: The fragmentation, diffusion, and dispersion that they identify on the side of the body (or “the subject,” to put it into the terminology used in this dissertation), in itself, does not necessarily mean that there is an absence of logos, centre, or coherence on the side of the structure. Somewhat in a parallel fashion, but recasting the frame of reading within the conceptual trajectory of the dissolution of structuralism into post-structuralism, I will try to reconstitute the Arrow-Debreu model as a structuralist model of the economy.

To begin with, the notion of “commodity space” constitutes “the economy” as a closed, homogeneous, and exhaustive space; its objects are constituted, within the discourse of commodity space, as homogeneous entities. The homogeneity of the commodity space
enables the production and consumption plans to be made in a relational manner: “A single commodity has significance to the consumer only in relation to the other commodities he has consumed, or plans to consume” (Geanakoplos 1989:45). Indeed, it is impossible not to agree with Amariglio and Ruccio when they identify “dispersion”, “fragmentation”, and “flatness” on the side of the subject. Rather than a unified subject, in the Arrow-Debreu model, we find a number of “practices” that follow pre-specified procedures of transformation of inputs into outputs (given the technology), maximisation of profits (given a price system), ordering of preferences (given the assumptions on consumption sets and preferences), choosing an optimal consumption plan subject to a wealth constraint (initial distribution of wealth). Given these determinate practices and their relational function within the structural logos of the model (the equilibrium), let alone a unified subject, the model can even dispense with the very notion of the subject as such: As Amariglio and Ruccio argue, all that is required by the model is appropriate “body parts” (automata) to enact/perform the necessary practices.

Nevertheless, the dispersion on the side of the subject, if not accompanied by a parallel dispersion of the side of the structure, is a good indicator to be suspicious of structuralism.\textsuperscript{25} The dispersion on the side of the subject may be read as a symptom of

\textsuperscript{25} Surely, there is no guarantee for this. As in some choice theoretic models of “multiple self”, the subject may have multiple selves, but each self in itself may be a fully constituted, self-grounded entity (Elster 1986). Moreover, in these models the different selves of the subject do not contaminate, shape, or modify one another; each self is treated as an individual, and accordingly, the meta-self of the subject is nothing but an aggregation of the preferences of the multiple selves inhabiting the subject. For an application of Arrovian social choice theory that derives the famous Arrow impossibility results within the context of an individual subject with multiple selves, see Kara (1997).
the loss of the causal priority of the subject within that particular discourse. In the Arrow-
Debreu model, the causal priority resides neither on the side of the producers nor the
consumers; each production plan and each consumption plan is conditional upon the
knowledge of the systemic changes in the price vector. The causal priority, instead,
resides in the preference and technological structure of the economy. In other words, while
the exogenously given, well-behaved preference (pre)orderings of “individual” consumers
may be a part of the story, they only enter into the picture to extent that they are
integrated into the relational/structural totality of preference orderings that are mediated
through the price system. Similarly, despite the fact that technology is exogenous to the
system (assumed to be convex), the production plans are ultimately made in a relational
manner. The exogenous status of the preference orderings or the technology does not
give them causal priority; once they enter into the model, the relationality of the
structural system takes them over. One is even tempted to single out the Auctioneer as
the final causal instance of this structural model. Indeed, as in all synchronic models,
diachronic movement is predicated upon the effectivity of an element that is exogenous to
the system. The auctioneer, as an exogenous supplement, as the exception to the series (it
is an agent unlike other agents) enables precisely this: Metaphorically standing in for a
highly domesticated, non-temporal, and teleological diachronic process that cannot be
explained within the strict synchronicity of the Arrow-Debreu model, the auctioneer is a
nothing but a “foundational fantasy” that generates the Walrasian telos, that delivers the
equilibrium price vector.

In linguistics, one of the key differences between structuralism and post-structuralism is
the way in which the latter unmoors the one-to-one, unambiguous, and stable relation
between the registers of the signifier and the signified purported by the former. Post-
structuralism, by privileging the never-ending *diachronic* unfolding of the signifying system,
places the emphasis on the surplus of meanings that a given signifier can connote
depending on the context of its inscription. In other words, for post-Saussurean
linguistics, the purported synchronic equilibrium of meaning is continuously and always
retroactively destabilised by the diachronic unfolding of the signifying chain. In the
Arrow-Debreu model, the equilibrium price vector (qua the register of the sign), coming
to existence in a strictly *synchronic* relational system, unambiguously represents the
underlying preference and technological *structure* of “the economy” (qua the register of the
referent). In other words, in the Arrow-Debreu model, despite the fact that the subject
has indeed dispersed into a number of disjointed subject positions, the structure of the
economy, centred around the logos of the equilibrium price vector, remains intact as a
coherent and stable totality.26 And it is precisely in this sense, the Walras-Arrow-Debreu
model, despite the self-proclaimed emphasis of its authors on the choices of the individual
(qua producer or qua consumer), could easily be read as a structuralist model.27

But why embark upon such a reading of the Walrasian model? Given the post-
Walrasian condition, given the fact that Arrow-Debreu model of the economy is now a matter of

26 Being stable in this sense does not mean that stability is possible in the formal sense. Stable as a
desired state of the economy…

27 Nonetheless, to argue that the Arrow-Debreu model is a structuralist model does not mean that
it is not contaminated by humanism. As it will become more clear as the dissertation unfolds,
structuralism and humanism are not two separate forms of essentialism. Rather they relate to one
another as the two sides of a moebius strip: They are two inextricably linked forms of
essentialism. Hence, the exogeneity of the preference orderings or the technology can be seen as
a humanist instance of a structuralist discourse.
history of economic thought courses, isn’t it frivolous to provide yet another reading? To the extent that new institutionalism is a response to the aporias of Walrasian model, the reading that is suggested here is more than a matter of historical curiosity. However, without dwelling too deeply into what has new institutionalism inherited from Walrasianism (this has to wait until section 6), I would like to delineate the contours of the dualism of subject and structure that is inherent to the Walrasian model.

The sheer possibility of two orthogonally different readings of the Walrasian model (humanist and structuralist) should itself be read as a symptom of the dualism of subject and structure that is inherent to its conceptual architecture. The model takes the exogenously defined human subjects and technology as the bedrock of its conceptual and normative edifice. In between, we have the relational system of excess demand functions mediated through the price vector. And at the apex of the model, we have the structural telos of equilibrium price vector. What is lacking is the animating force that will take the economy from the individual production and consumptions plans to the economy-wide equilibrium. The dualism of subject and structure manifests itself in the pre-determined nature of both the beginning and the end: For the Walrasian vision, not only the subject is pre-determined but also the structure. The agenda is not to theorise how subject and structure are mutually constitutive of one another, but how to connect an already constituted subject to an already constituted structure. This is the ground zero of the dualism of subject and structure.

But, before exploring the implications of this dualism of subject and structure for new institutionalism, we will explore the “other” neoclassical structuralism from the mid-
century. In this case, we observe a complete move from individualism to structuralism. Unlike the Walrasian model, these formulations do not permit both individualist and structuralist readings: they are unquestionably structuralist.

4. The marginalist unconscious: Chicago structuralism.

4.1. Introduction: The anti-marginalist controversy.

During the early days of post-WW2 Neoclassicism, the émigré affiliates of the Cowles Commission were not the only ones to flirt with a strand of structuralism. Maybe somewhat unexpectedly, some prominent representatives of the Chicago School were also to coquette with structuralism in print. The structuralism of the Chicago School was however not one of linguistic style. Rather this was an evolutionary structuralism that replaces the human motivation with the economic selection mechanism as the central causal engine that generates economic outcomes. The Chicago-style structuralism got articulated in the writings of the three high-profile representatives of the School: Armen Alchian (1950), Milton Friedman (1953), and Gary Becker (1962). All three of these papers were explicitly written in defence of Neoclassical marginalism against the criticism of being out of touch with the reality of the economy, the actual micro-level mechanics of the business process. In Oxford, UK, two economists were questioning whether the pricing and output decisions made by the actual entrepreneurs were indeed governed by the marginalist calculus (Hall and Hitch 1939). On this side of the pond, American economist Lester (1946) was claiming not only that the information that is necessary for the marginality calculations were not available to the actual entrepreneurs, but also that the immediate reactions of firms to the increases in labour costs were not to reduce output and employment levels but to search for ways to increase production efficiency and to
implement labour-saving technological changes (for surveys of this debate see, Mongin 1998 and Vromen 1995:14-17). Nonetheless, these criticisms were only a small sample of a broader critical affront to marginalism. As it is discussed above, since the beginning of the century, American Institutionalists were persistently questioning the realism and the relevance of the marginalist framework. Moreover, given its failure to successfully respond to the Great Depression, the legitimacy of the marginalist Neoclassicism was seriously undermined by the Keynesian revolution and its pragmatic policy success. It is in this context, the first one to come to the defence of marginalism, even before Alchian, Friedman and Becker, was Fritz Machlup. Questioning the empirical soundness of the research done by both Hall and Hitch and Lester, Machlup argued, “the marginal calculus may be followed without pronouncing or knowing any of the terms in question” (1946:539). In justifying his position, Machlup has argued that firms, even when they follow routine forms of behaviour, may still be simulating the marginal principles.

Interestingly enough this is one of the earlier moments when the notion of “unconscious” surfaces in economic theory:

…routine is based on principles which were once considered and decided upon and have been frequently applied with decreasing need for conscious choices. (Machlup 1946:524-5)

In other words, the neoclassical theorist’s model of the behaviour of the economic agent does not have to resemble the actual way in which the economic agent perceives and theorises her behaviour. Regardless of the conscious discourse of the agent that may speak of routines and rules-of-thumb, the Neoclassical theory will hear the marginalist unconscious speaking through the actions of the economic agent.
But, what was the logic that enabled the marginalist unconscious to operate behind the scene? What makes the individual firms follow the marginal principles irrespective of their conscious theorisation of their own activities? If the marginal calculus guided the agents, regardless of the way they consciously conceptualize their actions, then there must be some other (structural?) governing mechanism other than the conscious reasoning/rationality of the individual that inscribes its logic into their actions against the grain of their conscious discourse.

4.2. From the individual firm to the representative firm.

The first one to introduce biological structuralism into the picture was Armen Alchian (1950). Alchian began his seminal contribution by arguing that, under the conditions of uncertainty and incomplete information, it is not realistic to assume that individual firms will be able to undertake and follow marginal calculations. In other words, if the marginalist modelling of the economy made any sense, this could not be because individual firms were consciously maximising their profits. If the Neoclassical theory of the firm was to be defended, this defence cannot be made at the level of the individual firm, but rather at the level of the industry or in the characteristics of the Marshallian “representative firm”. A “representative firm” of an industry was “a set of statistics summarizing the various ‘modal’ characteristics of” (1950:217) that industry. In other words, even if each and every individual firm would follow a different (and non-marginalist) decision criteria, the industrial average will still tend towards the pattern of behavior as predicted by the Neoclassical theory. And the mechanism that would make sure that the industry average, the non-existent “representative firm” will approximate
the behavior of the hypothetical Neoclassical firm would be the selection mechanism of the market forces. In response to one of Lester’s criticism, Alchian wrote that:

…in attempting to predict the effects of higher real wages, it is discovered that every businessman says he does not adjust his labor force. Nevertheless, firms with a lower labor-capital ratio will have relatively lower cost positions and, to that extent, a higher probability of survival. The force of competitive survival, by eliminating higher-cost firms, reveals a population of remaining firms with a new average labor-capital ratio. The essential point is that individual motivation and foresight, while sufficient, are not necessary. (Alchian 1950:217)

These arguments were based on the assumption that, in the limit, the hypothetical Neoclassical firm represents the essential characteristics of the firms that will survive the competitive selection process. As Alchian suggests above, the essential point was that, for Neoclassical predictions, explanations, and diagnoses to hold at the level industry, it is not necessary for the individual firms to consciously maximize profits by making marginality calculations. As long as the market forces run their show and function as a selection mechanism, the only firms that will survive in the marketplace would be the ones that “realize positive profits”. In other words, by adopting the firms that are actually realizing positive profits and eliminating the others, an “economic” selection mechanism will make sure that the Neoclassical theorems about the directions of the changes, if not actual amounts of the changes, will hold at the industry level (Alchian 1950:220).\footnote{Alchian did not discount “the likelihood of observing ‘appropriate’ decisions” (1950:216). While his argument does not require ascribing non-random, adaptive behavior to the firms, Alchian did discuss two other mechanisms that provide some breathing space for some minimal intentionality: namely, “imitation” and “trail and error”.

4. 3. “Reckless” analogies.

It will be Milton Friedman (1953:22), with his famous billiard-player example, who would make the stronger argument: the selection mechanism will make sure that the only surviving firms will be the ones that “approximated behavior consistent with the maximisation of return” (see also, Vromen 1995:34). In this ubiquitously famous methodological essay, Friedman has mobilized an “economic” selection mechanism that betrays a striking resemblance to the one articulated by Alchian. Sharing the same Marshallian premises, both argued that the predictions of the profit-maximizing model should be tested at the industry level rather than at the level of the individual firm. Both claimed to abandon any need for assuming conscious optimization at the level of the firm: “Let the apparent immediate determinant of business behavior be anything at all—habitual reaction, random chance, or whatnot” (Friedman 1953:22). The difference between the two, however, resides in the notion of maximization-of-expected-returns hypothesis that informs Friedman’s understanding of the behaviour of the “representative firm”. For Alchian, the actual motivations of the successfully selected individual businesses do not have to approximate towards a notion of profit maximization. For Neoclassical theorems to hold as tendencies, having an “economic” selection mechanism in place that would force the industry average, or the “representative firm,” to move towards the predicted directions in response to changes in independent variables. For Friedman, in contrast, the selection mechanism will select the firms that will behave according to the maximization-of-expected-returns hypothesis. Since Friedman considered the maximization-of-expected-returns to be an adequate description of the profit-maximizing firms under probabilistic uncertainty, had they have an access to all the relevant data, and had they made all the necessary calculations:
Consider the problem of predicting the shots made by an expert billiard player. It seems not at all unreasonable that excellent predictions would be yielded by the hypothesis that the billiard player made his shots as if he knew the complicated mathematical formulas that would give the optimum directions of travel, could estimate accurately by eye the angles, etc., describing the location of the balls, could make lightning calculations from the formulas, and could then make the balls travel in the direction indicated by the formulas. Our confidence in this hypothesis is not based on the belief that billiard players, even expert ones, can or do go through the process described; it derives rather from the belief that, unless in some way or other they were capable of reaching essentially the same result, they would not in fact be expert billiard players. (1953:21)

Or, again, “unless the behavior of businessmen in some way or other approximated behavior consistent with the maximization of returns, it seems unlikely that they would remain in business for long” (1953:22). The individual firms that survived the competition process must be the ones that have approximated the “representative firm” of Neoclassical theory. The logic of the market forces, or the marginalist unconscious, manifests itself by selecting only the profit-maximizing firms. If they weren’t maximizing their expected profits, they wouldn’t be able to survive.

In the methodological literature, this example is usually seen as the ultimate justification of the irrelevance of the realism of the assumptions. In his comprehensive treatise on the origins of the new institutional economics, Jack Vromen (1995) shifts the emphasis from the methodological implications of this argument to its implicit reference to market forces as a mechanism that selects the most efficient (i.e., the profit-maximizing firms).

Similarly, reading these essays as the ur-texts of the evolutionary economics rather than only as methodological treatises, Loasby (1999) highlights the fact that while Alchian’s
appropriation of “natural selection mechanism” refers to tendencies, Friedman’s “reckless” formulation claims that regardless of the actual intentions of the individual firms, the market forces will lead the economy towards an equilibrium state.

4. 4. **Scarcity is all you need.**

The last instalment of the Chicago-style structuralist defence of marginalism was Gary Becker’s 1962 essay, “Irrational Behavior and Economic Theory”. In this essay, after distinguishing between the behavioural motivations of the individual household or firm and the aggregate market outcomes, Becker argued that the markets will tend to produce rational results that would systematically satisfy the basic predictions of Neoclassical economic theory, even if the consumers and the producers do not respond to changes in prices rationally. In Becker’s lexicon, the term irrational behavior refers to a spectrum of modes of behavior that range from “impulsive” to “inert”. While impulsive behavior would mean random, “inertia” refers to the resistance to change. According to Becker, changes in the opportunity sets (budget constraints), induced by the changes in relative prices, will force “the average economic actor” to behave the way the Neoclassical theory predicts her to behave, even when each actual economic actors in the market behave irrationally. In other words, for Becker, the shifts in the opportunity set provide the sufficient structural conditions to ensure the Law of Demand. In other words, the famous Law of Demand may still be reproduced at the level of the population average, even when no reference is made to the well-behaved preferences of the individual actors.

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29 No wonder than that in some contemporary introductory textbooks, the discussion of preferences and indifference maps are relegated to the appendix of the chapter on consumer choice. For instance, in Stiglitz and Walsh (2002) the demand curve is first derived without referring to the utility maps of the individual. In other words, the changes in budget constraint
On the production side, the Beckerian narrative is quite similar to that of Alchian’s: “firms could not continually produce, could not ‘survive’, outputs yielding negative profits, as eventually all the resources at their disposal would be used up” (1962:10).

Repeating the story he told on the demand side, Becker argues that changes in “relative input prices” will shape the production opportunity set in a manner that dictates “rational behavior”: a rise in the relative price of an input will move the input mix of the industry average away from that input. In short, according to Becker, the structure is embodied in the scarcity imposed on the economic subject by the budget line. The budget line itself, at the level of the market, is enough to derive the basic theorems of the Neoclassical economics.

4.5. Conclusion: Making sense of Chicago structuralism.

What is most fascinating about this brief episode of Chicago structuralism is that in their subsequent writings none of these economists further explored evolutionary economics. All of them used these selection mechanisms as rhetorical tools for defending their use of

are deemed sufficient to demonstrate the negative relation between the price and the change in quantity demanded.

30 One important criticism of Becker’s formulation is precisely the unexplained nature of the changes in relative real prices. Israel Kirzner (1962) argues that if no one in the economy is behaving rationally, if everyone is a price-taker, what causes the shifts in relative prices? Interestingly enough, in the context of Walrasian model, we observe a similar problem and the fiction of Auctioneer is there precisely to fill up the exact same problem: “Each individual participant in the economy is supposed to take prices as given and determine his choices as to purchases and sales accordingly; there is no one left over whose job is to make a decision on price” (Arrow 1959:43). If every agent in the economy is a price-taker, then who changes the prices?

31 With the exception of Becker’s (1976) socio-biology inspired treatment of evolution of altruism.
individualist models. Nonetheless, it is possible to read these forays into structuralism not only as rhetorical devices to fend off criticisms of the marginalist research agenda, but also as tentative explorations towards alternative conceptualisations of the competitive dynamics. The mobilization of evolutionary analogies furnishes these economists precisely with a selection mechanism that ensures that the markets will indeed tend towards equilibrium without any need to a central market authority. If the poverty of the Walrasian model in explaining the market adjustment process has rendered the economy vulnerable to government intervention, the evolutionary metaphors mobilized by these esteemed proponents of the Chicago School may have aimed to rekindle the neoclassical trust in the efficiency of the competitive markets. In other words, these three essays are neither only rhetorical devices nor simply the ur-texts of evolutionary economics. In addition to these, these texts are also the early signs of the emerging post-Walrasian condition: It is precisely in this sense, because it insistently positions itself as the anti-dote to Walrasianism, Chicago School will easily find a place for itself within the new institutionalist conversation.

Nonetheless, these texts are also important because in them it is possible to find a rather striking crystallization of the dualism of subject and structure. By totally abandoning any reference to the subject, by reducing the model to the effectivity of structure these texts

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32 The symptomatic unwillingness of these Chicago economists in further pursuing evolutionary theorising is also highlighted by Tjalling Koopmans (1957:140): “…if [evolutionary selection] is the basis for our belief in profit maximization, then we should postulate that basis itself and not profit maximization which it implies in certain circumstances.” Eminent evolutionary economists Richard R. Nelson and Sidney G. Winter (1982:141) also lament the absence of rigorous and formal engagement in these early elaborations of economic selection mechanisms.
enables us, the readers, to discern, as if under laboratory conditions, how in neoclassicism
the relation between the subject and the structure is not one of mutual constitution and
imbrication but one of encounter of two fully formed entities. The most acute
manifestation of this can be found in Becker’s treatment of the opportunity sets. In his
treatment, because the structure (of scarcity) that generates the downward-sloping
demand curve is embodied in the budget constraint, we can clearly discern in the phrase
“maximisation under budget constraint,” the famous short-hand of the consumer theory,
the logic of dualism at its purest: if the insatiable rational agent is the subject of the model,
the budget constraint is the structure of the model. Similarly in Friedman’s model, if the
profit maximising firm is the subject of the story, the market forces as the selection
mechanism is its structure.

5. The post-Walrasian condition.

5.1. The problem of periodization.

If one of the early signs of the emergence of the post-Walrasian condition is the dissenting
voice of the Chicago School, the other one is the interpretation of the Arrow-Debreu
model provided by Frank Hahn during a lecture that he gave at Cambridge University in 1974:

…to note that an Arrow-Debreu equilibrium must be an assumption that [one] is
making for the economy and then to show that why the economy cannot be in this
state. […] This negative role of Arrow-Debreu equilibrium I consider almost to be
sufficient justification for it, since practical men and ill trained theorists everywhere in
the world do not understand what they are claiming to be the case when they claim a
beneficent and coherent role for the invisible hand. (1984:52)
This quotation provides the most succinct definition of the post-Walrasian condition.

The description that will be provided in this section takes its point of departure from here. If the Auctioneer is the suturing (non-)part of the Arrow-Debreu model of the economy, the latter, it will argued, is the suturing (non)part of the emerging new institutionalism. As I have argued previously, the prefix “post-” should be read to imply neither chronological posteriority nor conceptual superiority but only conceptual presupposition. As much as new institutionalism is a departure from Walrasian economics, its (unfolding) rise to the status of hegemonic mode of economic inquiry is conditional upon the presence of Walrasianism as its intimate (or, as Jacques Lacan would argue, *ex-limite*) other.

Nonetheless, the proponents of the latter do not necessarily share this particular interpretation of the transition from neoclassicism to new institutionalism. For instance, two self-proclaimed “Post Walrasian” economists Samuel Bowles and Herbert Gintis consider the Walrasian economics to be an unnecessary detour:

> Perhaps the full development of the Walrasian model was a necessary precondition for developing analytical models of incomplete contracts and broader models of human behavior. […] But the founding contributions to incomplete contracts, game theory, and behavioral economics did not await the development of the Walrasian model. Rather, the foundations of a nonwalrasian approach were laid down by prominent economists in the period from 1937 to 1957, precisely the period in which the Marshallian paradigm was displaced by the nascent Walrasian paradigm, subsequent to which two generations of economists were taught Walrasian general equilibrium as the core of modern economic theory. […] In short, all of the underpinnings of a nonwalrasian economics had been set in place by 1960. Walrasian economics was not the precondition of these innovations—it was their competition. (2000:17)
Against the grain of such a linear narrative of the accumulation and unfolding of economic knowledge, it will be insisted here that what makes these disparate “foundational” texts foundational is their retroactive resignification within the new institutionalist literature. In other words, unlike what Bowles and Gintis desire to claim, these texts were not always already foundational. They have become foundational, canonical only après coup, as a result of the emergence of new institutionalism within the context of post-Walrasian condition.

Therefore, the periodization implied by the term post-Walrasian condition is not a chronological periodization. In fact, the history development of economic discourses is always a history of forgotten, retrieved, and resignified texts. Some have been tempted to distinguish neoclassical economics and Marxian economics in their respective relation to their own history: while neoclassical economists have come to consider the history of their own tradition as a linear progression where the “original” formulations in Adam Smith’s *The Wealth of Nations* are continually refined, sometimes it is argued that, unlike the history of neoclassical economics, Marxian economics could be characterised as a series of returns to and renewed interpretations of Marx’s and earlier Marxists’ writings. I shall argue that, regardless of its teleological self-understanding of its own history, the way in which the history of neoclassical (and its inheritor, new institutionalist) economics unfolds is not much different from the way in which the history of Marxian economics unfolds: with returns, re-interpretations, shifts, occlusions, and anomalous episodes. If there is any linearity in the history of mainstream economics, it can only be found in the modernist writings of the historians of economic thought. Because I reject to periodize the development of economic discourses as a linear progression, in the next section, I will
sketch the contours of the post-Walrasian condition primarily as a conceptual, rather than a chronological, disassembling of the Arrow-Debreu model.

### 5. 2. Disassembling of the Arrow-Debreu model.

In this section, the process of disassembling of the Arrow-Debreu model will be discussed in five modules: commodity space, rationality (consumption), production, equilibrium and efficiency, and the political. Each module will demonstrate how the dissection of the Walrasian model has provided the conceptual conditions of possibility for a variety of new institutionalist approaches. Table 2.1 aims to be a handy guide to the post-Walrasian condition. While the first row of the table provides a summary of the Walrasian model of the economy, the second row suggests a mapping of the New Institutional economics as a post-Walrasian formation. The third row suggests some the directions of research that are logically possible, but, given their shared commitment to dualism of subject and structure, are practically impossible for new institutional economics to take. In each following subsection, I will try to delineate how certain new institutional debates are implicated in Walrasian economics and its *problematiques*. In each case, I will point out not only what unifies these heterogeneous approaches but also to logic of their differences.
<table>
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<th>Commodity space</th>
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<td><strong>Walrasian economics</strong></td>
<td>Complete contracts; Commodity completely specified, physically, temporally, and spatially; Infinitely inclusive and temporally infinite commodity space.</td>
<td>Complete, reflexive, transitive, continuous, insatiable, and convex; The consumer chooses between completely specified consumption plans defined within the commodity space.</td>
<td>Exogenously given technology; Convex production functions; production process does not exist; production is fricitionless, automatic process of optimisation… Distribution of income is a non-problem.</td>
<td>The auctioneer conducts the outside-of-real-time tâtonnement process to arrive to the equilibrium price vector; Given the assumptions pertaining to the economy, all competitive equilibria are Pareto efficient (PWT); Every Pareto efficient state is an equilibrium attainable through competitive markets (SWT).</td>
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<tr>
<td><strong>New institutional economics</strong></td>
<td>Incomplete contracts: Moral hazard and adverse selection (Information economics, J. Stiglitz); Incomplete or implicit contracts? Or, is Chicago School a part of new institutionalism?</td>
<td>Bounded Rationality (Behavioral economics, H. Simon); Is it really different from rationality? Proliferation of behavioral orientations: Is it possible?</td>
<td>The principal-agent theoretic approaches (A. Alchian and H. Demsetz); Transaction costs approach (R. Coase, O. Williamson);</td>
<td>“Conservative/Neoliberal” agenda: The government intervenes to make sure that the conditions of the competitive equilibrium are satisfied; “Liberal/Social democrat” agenda: The government intervenes to remedy when the conditions of the competitive equilibrium cannot be met (“market failures”); “Socialist/State capitalist” agenda: Redistribution of wealth and Central Planning Board instead of the auctioneer. There is no theory of state, power, or politics; The role of government is akin to that of an “engineer” (A. Sen 1987).</td>
</tr>
<tr>
<td><strong>Possible lines of flight</strong></td>
<td>Taking the incompleteness of contracts literally (Incompleteness of the “meaning”… B.Lyons and J. Mehta)</td>
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<tr>
<td><strong>Table 2.1.</strong> The anatomy of the post-Walrasian condition.</td>
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5. 2. 1. Commodity space: Incomplete or implicit contracts?

The Arrow-Debreu model defines the commodity as “a good or a service completely specified physically, temporally, and spatially” (Debreu 1959:32). Packed within this definition are a number of implicit assumptions: that it is possible to fully specify contracts; that there are no externalities; that all commodities are excludable and rival; that there is a complete set of future markets; that there is no fundamental uncertainty (Keynesian or Knightian); that there are no information asymmetries; and so on. In short, the process of writing contracts and exchange goods is a black box, a non-issue for the Arrow-Debreu model. The task of new institutionalism is to unpack this black box and make “the commodity” and “the contract” a central issue of economic analysis.

As such, this Panglossian definition of the commodity space has two significant implications. On the one hand, it opens the possibility subsuming every “thing” or “activity” under its rubric: to the extent that they can be defined as a commodity, every “thing” or “activity” can become an object of economic analysis. This flexibility furnishes the neoclassical economics with a conceptual power to engulf everything within its conceptual space and as such provides the conceptual framework for what is also known as the “imperialism of economics”. On the other hand, it crystallizes the benchmark, the ideal, and the reference point that informs the neoclassical vision. As I shall try to argue, these two implications will constitute the parameter within which new institutional economics, despite all its heterogeneity operates.
It will be useful to begin with the deconstruction of the commodity space and the notion of the completeness of contract. To the extent that complete markets entail that every commodity needs to be specified “physically, temporally, and spatially,” they also entail to the evaporation of “competition”. Since each commodity has to be differentiated along its physical attributes its location, its temporal coordinates, at the limit each commodity will be a “unique” entity. What’s more, those who buy and those who sell the commodity will also have to be unique. In other words, this particular way of specifying the commodity space falls into a contradiction with another assumption of the Arrow-Debreu model: that, in each market, there will be a large number of buyers and sellers, each of them facing the given price system (Stiglitz 1994:34-5). This inconsistency between the assumptions of complete markets and competitive markets enables us to identify the central role that the conceptualization of “contracts” has in understanding the post-Walrasian condition. Indeed, two seemingly divergent tendencies of new institutionalism emerge out of this deconstruction of the commodity space and the notion of the completeness of contracts: those who see market failures (incomplete contracts) everywhere and those who see markets (competition) everywhere. Are these tendencies related to one another?

On the one hand, for many new institutionalist approaches, and especially for the “new information economics”, not only the writing of contracts entails transaction costs, but also gathering of information can have significant costs. As such, given the costs involved in gathering information and the “opportunism” of the rational actors, two types of problems arise in the context of market exchange: adverse selection and moral hazard. While the former refers to the problems pertaining to gathering accurate and complete
information regarding the commodities before the writing of contracts, the latter refers to impossibility of writing a contract that can guarantee that the agent will eventually deliver the exchanged commodity (good or service) to the satisfaction of the principal. Indeed, new institutional economics explains a whole range of “non-market” institutions as attempts to remedy the problems that arise due to such market failures.

In contrast to this skein of new institutionalism, contributors associated with the Chicago School (e.g., George Stigler, Gary Becker) are well known for their perseverance in finding implicit markets in almost all areas of human social interaction. The Chicago School’s commitment to see implicit markets, shadow prices, contractual relations wherever they look should be read in light of the Chicago structuralism discussed above, in section 4. The metaphor of selection mechanism that informed the Chicago structuralism, to the extent that the logic of selection can be applied to any social interaction, had the additional perk of enabling the Chicago economist to metonymically slide from the logic of selection to the logic of markets. In other words, according to the Chicago economist, it should be possible to apply the logic of the markets to any social context that the logic of “the survival of the fittest” could also be applied—for these two logics are one and the same thing.

Therefore, while a strand of new institutionalism argues that social institutions make up for the fact that markets are incomplete, that the commodity space is truncated, another strand argues that markets are everywhere, everything could be seen as commodities, everything can have shadow prices. Is it possible to conceptualise these two approaches within the same framework, as two strands of new institutionalism? Aren’t they
diametrically opposite to one another? Not necessarily—the difference is simply an interpretative/political/aesthetic matter. Deirdre McCloskey offers one interpretation:

…whether or not the market “works” depends on how closely one is examining it. The market is like a post-impressionist painting. If one steps back and squints, then the gold points fade to insignificance, and there is effectively one world price for gold. When one gets close enough to any market, on the other hand, the brush strokes appear.

The close view is no more real than the far view. It may be more or less convenient for this or that human purposes to take a close view or a far view. That is all. (McCloskey 1994:158).

To put it in slightly different terms, for McCloskey, whether or not the market works is a matter of aesthetic—and I would add, political—choice. Indeed, seen from one perspective, the gaps within the commodity space do create openings for “opportunism” to sneak in and pave the way for the failure of markets (in the form of adverse selection and moral hazard). Seen from the other perspective, however the same gaps could also be seen as sites for new markets to emerge: If it is too costly to gather information, why not create a new market for information gathering? Or, why should one consider the gaps in the commodity space, the incompleteness of contracts, the transaction costs to be the failure of markets? In fact, they could as well be seen as the failure of introducing the appropriate markets. Moreover, why can’t one theorize those “non-market” institutions as implicit markets? In other words, if one were pro-intervention, one would emphasize market failures and non-market solutions and if one were pro-market, one would seek markets and market-oriented solutions.
Nevertheless, by claiming that whether one sees markets or failures depends on how “close” one wants to look at it, McCloskey minimizes the differences between these two skeins. In order to make her case, McCloskey argues that the proponents of the Chicago School were always aware of the costs involved in market transactions. In doing so, McCloskey argues that the market-failure approach is only coming to terms with what the proponents of the Chicago School have been arguing for long.

While I do agree that both approaches share a common ground, I don’t think that the story is as simple as she purports it to be. To begin with, the two skeins descend from two distinct traditions. While the market failure approach descends from the Walrasian tradition as its internal critique, the tendency that sees markets everywhere descends from the Marshallian tradition. While the former operates from within and relaxes the assumptions of the Arrow-Debreu model, the latter is located squarely within the pragmatist tradition of the Chicago School. And indeed, their policy conclusions are diametrically opposite: For the Marshallian approaches markets always work and markets should always be preferred over non-market institutions. For the Walrasian skein, markets may not deliver the promised outcome, the pareto optimality—they may need to be supplemented. In other words, for the Marshallian skein, there are never enough markets and for the Walrasian skein, markets are never enough.

But what would be “enough” for new institutionalism? What would it mean to have “enough” markets? Or, what would markets be “enough” for? As I have mentioned above, when the economy has “enough” markets (i.e., complete set of markets) or when the markets are “enough” (complete contracts), which boils down to the same thing, the
economy will lead to its ideal state: the general competitive equilibrium. My argument here is not that the proponents of new institutional economics believe in the possibility of the Arrow-Debreu equilibrium. On the contrary, I argue that these approaches, whether they emphasize the failures or successes of markets, share the same distaste for the Walrasian vision. Moreover, I shall argue that they inhabit the conceptual space that is vacated by the Walrasian model. To put it differently, despite their critical stance towards the Walrasian model and despite their differences with one another, they continue to inhabit the dualist problematic that informed the Walrasian framework: Given the “opportunist” nature of human subjects, is it possible to achieve desirable social outcomes through markets? While the answer of the Chicago School is affirmative, the answer of the new information economics is in the negative. The debate itself however, will continue as a constitutive problematic of new institutionalism.

One important proof of the post-Walrasian nature of these new institutionalist debates can be found in what sort of research remains in the periphery of the economic analysis. Indeed, one need not conceptualize the incompleteness of contracts as an outcome of the “opportunism” of individual subjects. Instead, it is possible to locate the incompleteness in the very textual nature of the “contract”. The post-structuralist insight pertaining to the surplus of meanings suggests that all contracts, whether they are written among “opportunistically” or “altruistically” inclined economic actors, will inevitably be incomplete. Moreover, when Lacan argues that “communication is impossible”, he is suggesting that all social norms and institutions are pragmatic social devices to make up for the impossibility of communication. In other words, to argue that incompleteness of contracts is a market failure or the solution to such market failures is to introduce more
markets is to exaggerate the role and functions of markets to say the least. I would like to argue not only that these failures are not necessarily exclusive to markets (other institutions may also suffer from similar failures), but also that markets are not necessarily always the best way to deal with such failures. To the extent that the economy remains to be conceived as an ontology of contracts, new institutionalism will continue to remain post-Walrasian. Instead, we need to reorient our perception and conceive both contracts and other social institutions as equally successful or failing devices to make up for the impossibility of communication. To put it differently, the contracts are neither the source of the problem nor the single social device we have to deal with the impossibility of communication. A non-Walrasian research agenda can only be achieved if this insight is thoroughly recognised.

5. 2. 2. Rationality.

I will discuss the question of rationality in two dimensions: the capacity and the behavioral orientation of rationality. While Herbert Simon’s notion of bounded rationality is mainly a discussion of the informational capacity and the scope of human mind, more recent models of non-selfish behavioral orientations is about the underlying motivations for choice. While it is possible to consider these two dimensions simultaneously, I will refrain from complicating the matters. Nevertheless, it must be made clear that neither the notions of bounded rationality nor the models of other than self-interested motivated rationalities move beyond the dualism of subject and structure. Moreover, they continue to inhabit the Walrasian problematic, even as they are introduced as problematizations of the Arrow-Debreu model.
Trouble with optimization Herbert Simon distinguishes between substantive and procedural rationality. Substantive rationality refers to the notion of rationality that “is appropriate to the achievement of given goals within the limits imposed by given conditions and constraints” (Simon 1976:130). As such, substantive, or as suggested by Mäki (1993:16), outcomes rationality, is only concerned with the attainment of given goals (utility or profit maximization) and not with the process of reasoning. To put it differently, for those economic analyses that are based on substantive rationality, the process of achieving the given goals, the process of reasoning, is a black box: once substantial rationality is assumed, “economic analysis (descriptive or normative) could usually be carried out using such standard tools as the differential calculus, linear programming, or dynamic programming” (Simon 1976:131). In this manner, there will be no need for economic analysis to theorise the particular process through which a given goal is achieved. It may be interesting to note that, the whole enterprise of Chicago structuralism was an effort to justify that there is no need to unpack to process of reasoning. In contrast to this impulse, Simon aims to unpack precisely the process through which human beings reason and make decisions.

Moreover, Simon argues, “the assumptions of utility or profit maximization, on the one hand, and the assumption of substantive rationality, on the other, freed economics from any dependence upon psychology. As long as these assumptions went unchallenged, there was no reason why an economist should acquaint himself [sic] with the psychological literature on human cognitive processes or human choice. There was absolutely no point at which the findings of psychological research could be injected into the process of economic analysis. The irrelevance of psychology to economics was complete” (1976:131). Psychology as a discipline and a body of knowledge may indeed be irrelevant for economics. Nonetheless, to the extent that economics has normative, welfarist, efficiency claims pertaining to economic states, “psychologism” will continue to be relevant for economic analysis (see section 2, above).
In particular, a conceptual problem troubles the notion of substantive rationality. First to formulate this problem were Marschak (1954) and Stigler (1961). These authors highlighted the “costs” involved in gathering and processing information and solving the maximization problem involved. Therefore, even before embarking upon making a decision, a fully rational subject will need to calculate whether or not it is worthwhile to make such a decision (for a discussion, see Knudsen 1993a). The devastating nature of the problem of circularity involved here could not be overemphasized: In order to make a calculation about the costs involved in making decisions, one has to first make the decision

Procedural rationality, on the other, hand concern
Table 2.2. The logic of new institutionalist hegemony: (1) Logic of difference: Walrasian economics is the constitutive exclusion. (2) Logic of equivalence: Particular new institutionalist approaches (P_n) share the dualism of subject and structure.